

<213> Homo sapiens

<400> 1274

```

Ala Gly Glu Thr Gly Ala Gly Lys Thr Met Val Val Thr Gly Ile Gly
 1           5           10           15
Leu Leu Leu Gly Asp Lys Ala Asp Thr Gly Leu Val Arg His Gly Cys
 20           25           30
Asp Arg Ala Val Val Glu Ala Val Leu Asp Thr Pro Asp Ala Gly Arg
 35           40           45
Val Ser Glu Leu Gly Gly Thr Val Glu Asp Gly Glu Val Ile Cys Ala
 50           55           60
Arg His Ile Thr Ser Arg Arg Ser Arg Ala Leu Leu Gly Gly Ala Gln
 65           70           75           80
Val Thr Ala Ser Gln Leu Ala His Ile Val Gly Asp Gln Val Thr Ile
 85           90           95
His Gly Gln Ser Glu Gln Val Arg Leu Val Asp Ala Ala Arg Gln Leu
 100          105          110
Asp Val Val Asp Arg Ala Ala Gly Asp Glu Leu Ala Gly Tyr Leu Ser
 115          120          125
Arg His Ala Gln Leu Trp Ser Glu Phe Arg Ala Ala Ser Gln Arg Leu
 130          135          140
Gln Arg Leu Asn Glu Asp Arg Ala Gly Ala Glu Met Glu Arg Glu Val
 145          150          155          160
Leu Thr Arg

```

<210> 1275

<211> 384

<212> DNA

<213> Homo sapiens

<400> 1275

```

nngctagcaa gtgcaagtac gagcaaaagt tatcagcaac agcgggaggc tgaacttctc
60
gtcgcacggc tagaggggga aatgcacgca cacagcgacc cgaccccgtc gccacaacca
120
cccaggatg caggggtgat tgatgttgcc ctgaaagagg cgaagaaagc ctttgatgaa
180
ggcaaggctg atctaattga taaactcaat caggagatac ttcgcctggc aaacgaattc
240
ggtgcgctcg ggcttgaatc tattgagctt ggctccgacg cgaagatggc agtacgcaaa
300
ggcaatcaga aatcagcggt cagcaggctg actcccgggt aacgtctcag gctgcgcat
360
gctacagcca tcgcgttggt acgc
384

```

<210> 1276

<211> 128

<212> PRT

<213> Homo sapiens

<400> 1276

```

Xaa Leu Ala Ser Ala Ser Thr Ser Lys Ser Tyr Gln Gln Gln Arg Glu

```

```

1           5           10           15
Ala Glu Leu Leu Val Ala Arg Leu Glu Gly Glu Met His Ala His Ser
20           25           30
Asp Pro Thr Pro Ser Pro Gln Pro Pro Glu Asp Ala Gly Leu Ile Asp
35           40           45
Val Ala Leu Lys Glu Ala Lys Lys Ala Phe Asp Glu Gly Lys Val Asp
50           55           60
Leu Met Asp Lys Leu Asn Gln Glu Ile Leu Arg Leu Ala Asn Glu Phe
65           70           75           80
Gly Ala Leu Gly Leu Glu Ser Ile Glu Leu Gly Ser Asp Ala Lys Met
85           90           95
Ala Val Arg Lys Gly Asn Gln Lys Ser Ala Phe Ser Arg Leu Thr Pro
100          105          110
Gly Glu Arg Leu Arg Leu Arg Ile Ala Thr Ala Ile Ala Leu Leu Arg
115          120          125

```

&lt;210&gt; 1277

&lt;211&gt; 392

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1277

```

cagtttcagc cccgctgtgt gtccccaatt cctgtctctc ctaccagccg gattcagaac
60
ccagtggctt tcctcagctc tgttctgcct tctctccctg ccatcccacc cacaaatgcc
120
atggggctgc ctagaagtgc accatccatg ccatcccagg gattagcgaa gaaaaataca
180
aagtctctctc aaccagtga tgaatgataac attcgtgaaa ctaagaacgc agtgattcga
240
gacttggggg aaaaaataac ttctcagtgt gtcagaccaa accagcagga gtacaaaatt
300
tcaagctttg agcagaggct gatgaatgaa atagagtttc gcttggaacg tactcctgtt
360
gatgaatcac atgatgaaat tcaacatgat gg
392

```

&lt;210&gt; 1278

&lt;211&gt; 130

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1278

```

Gln Phe Gln Pro Arg Cys Val Ser Pro Ile Pro Val Ser Pro Thr Ser
1           5           10           15
Arg Ile Gln Asn Pro Val Ala Phe Leu Ser Ser Val Leu Pro Ser Leu
20           25           30
Pro Ala Ile Pro Pro Thr Asn Ala Met Gly Leu Pro Arg Ser Ala Pro
35           40           45
Ser Met Pro Ser Gln Gly Leu Ala Lys Lys Asn Thr Lys Ser Pro Gln
50           55           60
Pro Val Asn Asp Asp Asn Ile Arg Glu Thr Lys Asn Ala Val Ile Arg
65           70           75           80
Asp Leu Gly Lys Lys Ile Thr Phe Ser Asp Val Arg Pro Asn Gln Gln

```



85 90 95  
 Glu Tyr Lys Ile Ser Ser Phe Glu Gln Arg Leu Met Asn Glu Ile Glu  
 100 105 110  
 Phe Arg Leu Glu Arg Thr Pro Val Asp Glu Ser His Asp Glu Ile Gln  
 115 120 125  
 His Asp  
 130

<210> 1279  
 <211> 297  
 <212> DNA  
 <213> Homo sapiens

<400> 1279  
 atggagtcgc agactctccg ccacatgacg gaggacgact gcgccgacaa cggcatccca  
 60  
 ctccccaacg tcaactccag gatcctctct aaggatcatcg agtactgcaa cagtcacgtc  
 120  
 cagcgcgcgc ccaaaccgcg tgactccgct gcctccgagg gcggcgagga cctcaagagc  
 180  
 tgggacgcga agttcgtcaa ggtggaccag gctacgctct tcgacctcat cctggctgcc  
 240  
 aactatctga acatcaaggg attgctggac ctgacctgcc agacgggtgc tgacatg  
 297

<210> 1280  
 <211> 99  
 <212> PRT  
 <213> Homo sapiens

<400> 1280  
 Met Glu Ser Gln Thr Leu Arg His Met Ile Glu Asp Asp Cys Ala Asp  
 1 5 10 15  
 Asn Gly Ile Pro Leu Pro Asn Val Asn Ser Arg Ile Leu Ser Lys Val  
 20 25 30  
 Ile Glu Tyr Cys Asn Ser His Val His Ala Ala Lys Pro Ala Asp  
 35 40 45  
 Ser Ala Ala Ser Glu Gly Gly Glu Asp Leu Lys Ser Trp Asp Ala Lys  
 50 55 60  
 Phe Val Lys Val Asp Gln Ala Thr Leu Phe Asp Leu Ile Leu Ala Ala  
 65 70 75 80  
 Asn Tyr Leu Asn Ile Lys Gly Leu Leu Asp Leu Thr Cys Gln Thr Gly  
 85 90 95  
 Ala Asp Met

<210> 1281  
 <211> 515  
 <212> DNA  
 <213> Homo sapiens

<400> 1281  
 acgcgtgaag ggggctttgg aggggatggc ttctggactg cacgatgggt gaacacagtt  
 60

ttttaaactc ttttccacat ctgtataggt ttgaaaatta tcaacaactc atggggaggg  
 120  
 tggcgtgccca ggtcatggct gcctggagcc cttctgagga gggccggctc aaccgaggac  
 180  
 gccctcccca ctaccaagta ggcactgcgg gcaggagtcg ccacccccac cccaaggaag  
 240  
 ttcagaacag gcaacaggag gagcctgact ccaacagagt tgggtgtcatc cggcgcacgc  
 300  
 ctaaggacgt cacaacacat caactctggg agcccaaggg ggtgtgtggt cactcaagg  
 360  
 ggaagatgat ccagaagctc tgctccctcc ctttgctttt gaagaacaca ggagtgcac  
 420  
 gtggggaatc taccggctta atttcttctt agtaacaggc atagtaggat caaaaaattt  
 480  
 ttgcttctaa tttttaaaaa cattcaatgt gtaca  
 515

<210> 1282  
 <211> 135  
 <212> PRT  
 <213> Homo sapiens

<400> 1282  
 Met Gly Glu His Ser Phe Leu Asn Ser Phe Pro His Leu Tyr Arg Phe  
 1 5 10 15  
 Glu Asn Tyr Gln Gln Leu Met Gly Arg Val Ala Cys Gln Val Met Ala  
 20 25 30  
 Ala Trp Ser Pro Ser Glu Glu Gly Arg Leu Asn Arg Gly Arg Pro Pro  
 35 40 45  
 His Tyr Gln Val Gly Thr Ala Gly Arg Ser Arg His Pro His Pro Lys  
 50 55 60  
 Glu Val Gln Asn Arg Gln Gln Glu Glu Pro Asp Ser Asn Arg Val Gly  
 65 70 75 80  
 Val Ile Arg Arg Ile Ala Lys Asp Val Thr Thr His Gln Leu Trp Glu  
 85 90 95  
 Pro Lys Gly Val Cys Gly Pro Leu Lys Gly Lys Met Ile Gln Lys Leu  
 100 105 110  
 Cys Ser Leu Pro Leu Leu Leu Lys Asn Thr Gly Val Thr Arg Gly Glu  
 115 120 125  
 Ser Thr Gly Leu Ile Ser Ser  
 130 135

<210> 1283  
 <211> 296  
 <212> DNA  
 <213> Homo sapiens

<400> 1283  
 gaattcctca caatgaactg cagtgtctgg aggaccagtt gggtagcctt actccgggtc  
 60  
 tcactgcag aacttatata tatatgcttt gtgcacacaa agaaaaacag cagcccaaaa  
 120  
 gaatcccggc tggggctctt aggagggagg aaagtccca caggtaactc actgggtaat  
 180

tttaaagagc tcaggaaagg aaggaaggat ggctttttct cttgtgagtc aagacaaggt  
 240  
 cctgatgata accctcccag atcagaacgt aactttcaac ccacgagtgc tgctcn  
 296

<210> 1284  
 <211> 94  
 <212> PRT  
 <213> Homo sapiens

<400> 1284  
 Met Asn Cys Ser Val Trp Arg Thr Ser Trp Val Ala Leu Leu Arg Val  
 1 5 10 15  
 Ser Thr Ala Glu Leu Ile His Ile Cys Phe Val His Thr Lys Lys Asn  
 20 25 30  
 Ser Ser Pro Lys Glu Ser Arg Leu Gly Leu Leu Gly Gly Arg Lys Val  
 35 40 45  
 Pro Thr Gly Asn Ser Leu Val Asn Phe Lys Glu Leu Arg Lys Gly Arg  
 50 55 60  
 Lys Asp Gly Phe Phe Ser Cys Glu Ser Arg Gln Gly Pro Asp Asp Asn  
 65 70 75 80  
 Pro Pro Arg Ser Glu Arg Asn Phe Gln Pro Thr Ser Ala Ala  
 85 90

<210> 1285  
 <211> 526  
 <212> DNA  
 <213> Homo sapiens

<400> 1285  
 gggcccttc ttacctgcc cttccccgtg ccaccaaccc gtagacaggg agggcaagca  
 60  
 gtgaaaggtc catctagagg aggtaaaaga cagggctgag ggaaaacgcc ttgtacagtc  
 120  
 aggatggcag atgtactctg tcagggaaga cagccccaca gaaaaggctc ggcttggcca  
 180  
 agaagcaaca aaagggattc tacacctcag accagggagg gggaatgtgt acaaagattg  
 240  
 gatttactaa attcagagcc acagactttc aggtacttcg gtgaagatca gtgctctttc  
 300  
 aaaccacac ttcagaggca ggcttttaaaa cgcttgactt ctgtcagggc cacaggctgg  
 360  
 gctgccccaa gtcctacgg ggctggggga tccgagagag gacttcccac tagtccaaga  
 420  
 tgtggtgact agtttcaagc cagagattga ggagcagacc tgatgccctt tcggggccct  
 480  
 gctaagaacc tgattcgagg aaaaggaagt gaagacagta acgcgt  
 526

<210> 1286  
 <211> 102  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 1286

```

Met Ala Asp Val Leu Cys Gln Gly Arg Gln Pro His Arg Lys Gly Ser
 1           5           10           15
Ala Trp Pro Arg Ser Asn Lys Arg Asp Ser Thr Pro Gln Thr Arg Glu
      20           25           30
Gly Glu Cys Val Gln Arg Leu Asp Leu Leu Asn Ser Glu Pro Gln Thr
      35           40           45
Phe Arg Tyr Phe Gly Glu Asp Gln Cys Ser Phe Lys Pro Thr Leu Gln
      50           55           60
Arg Gln Ala Leu Lys Arg Leu Thr Ser Val Arg Ala Thr Gly Trp Ala
      65           70           75           80
Ala Gln Ser Ser Tyr Gly Ala Gly Gly Ser Glu Arg Gly Leu Pro Thr
      85           90           95
Ser Pro Arg Cys Gly Asp
      100

```

&lt;210&gt; 1287

&lt;211&gt; 333

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1287

```

acgcgtgaag gggagaggca gctccagggtg gaggggaagtg catgaggaag cagagaggca
60
ggcgacaggc agcgtggctg gggctgggca ggccttccag tttgattgca gccagagggt
120
caggtgagaa gaaggtacaa caagcaagga agggcccagg aagccactgg ggggtgttga
180
gccattgaat attctggatt ttaggacatt tctgtggctg actccactgc catcagagtt
240
catccacccc aactccagcc tgagagtgtt ggggcactgg gcactccgga attcttcaaa
300
gctctgatgc aacatgtccc caggggtgtct gac
333

```

&lt;210&gt; 1288

&lt;211&gt; 105

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1288

```

Met Leu His Gln Ser Phe Glu Glu Phe Arg Ser Ala Gln Cys Pro Ser
 1           5           10           15
Thr Leu Arg Leu Glu Leu Gly Trp Met Asn Ser Asp Gly Ser Gly Val
      20           25           30
Ser His Arg Asn Val Leu Lys Ser Arg Ile Phe Asn Gly Ser Asn Thr
      35           40           45
Pro Ser Gly Phe Leu Gly Pro Ser Leu Leu Val Val Pro Ser Ser His
      50           55           60
Leu Thr Ser Gly Leu Gln Ser Asn Trp Lys Ala Cys Pro Ala Pro Ala
      65           70           75           80
Thr Leu Pro Val Ala Cys Leu Ser Ala Ser Ser Cys Thr Ser Leu His
      85           90           95
Leu Glu Leu Pro Leu Pro Phe Thr Arg

```

100

105

<210> 1289  
 <211> 336  
 <212> DNA  
 <213> Homo sapiens

<400> 1289  
 acgcgtgtct gtgtacaggt ggaaggggat gggtatgaga tggcgcagcg tgtgcatggg  
 60  
 cacggcggtat ggtgtgtgag tgcactcgtg tgccggagag ctgtaagctg ctggctgagt  
 120  
 cctgcacgggt ggaggaggca aggtggcccc tgcctgtggg cacagagccc accttccggt  
 180  
 ccagccccgag gcccctttcc cagagcccc tccaaggagg ccataccacc tgcattcccc  
 240  
 agatggcgtg gggcgccctt ggtgcaggag caggggacag tcagggaggc gtgtggcgga  
 300  
 cagtagcagc cccccagccc cctccccccc accggt  
 336

<210> 1290  
 <211> 89  
 <212> PRT  
 <213> Homo sapiens

<400> 1290  
 Met Val Cys Glu Cys Thr Arg Val Pro Glu Ser Cys Lys Leu Leu Ala  
 1 5 10 15  
 Glu Ser Cys Thr Val Glu Glu Ala Arg Trp Pro Leu Pro Val Gly Thr  
 20 25 30  
 Glu Pro Thr Phe Arg Ser Ser Pro Arg Pro Leu Ser Gln Ser Pro Leu  
 35 40 45  
 Pro Arg Gly His Thr Thr Cys Ile Pro Lys Met Ala Trp Gly Val Pro  
 50 55 60  
 Gly Ala Gly Ala Gly Asp Ser Gln Gly Gly Val Trp Arg Thr Val Ala  
 65 70 75 80  
 Ala Pro Gln Pro Pro Ser Pro His Arg  
 85

<210> 1291  
 <211> 379  
 <212> DNA  
 <213> Homo sapiens

<400> 1291  
 tggccattcca cctctgtcag ctgttccggc aaccattca gatcattgtg gtagtaacga  
 60  
 atcttctgca acggcccggc accgtccacg cgagccagag gttgatagcc ttcattcctca  
 120  
 taaacgtaca ggcttgtctg gctgtgttta tgctcctgca ataaccgcaa accatcccg  
 180  
 gtaaacgggg tttcccccaa cggataccca tcaactgcat gctcggtttt ttctatccga  
 240

cgccccagcg ggtcatcac catcctgacc acgctaccat cgtcattacg cacttcaacc  
 300  
 agecggcttt cagegtcata cgcaaaccgc tgcacgccac gcttggcact gcgcttctcg  
 360  
 accatccgcc caaacgcgt  
 379

<210> 1292  
 <211> 121  
 <212> PRT  
 <213> Homo sapiens

<400> 1292  
 Met Val Glu Lys Arg Ser Ala Lys Arg Gly Val Gln Arg Phe Ala Tyr  
 1 5 10 15  
 Asp Ala Glu Ser Arg Leu Val Glu Val Arg Asn Asp Asp Gly Ser Val  
 20 25 30  
 Val Arg Met Val Tyr Asp Pro Leu Gly Arg Arg Ile Glu Lys Thr Glu  
 35 40 45  
 His Gly Ser Asp Gly Tyr Pro Leu Gly Glu Thr Arg Phe Thr Trp Asp  
 50 55 60  
 Gly Leu Arg Leu Leu Gln Glu His Lys His Ser Gln Thr Ser Leu Tyr  
 65 70 75 80  
 Val Tyr Glu Asp Glu Gly Tyr Gln Pro Leu Ala Arg Val Asp Gly Ala  
 85 90 95  
 Gly Pro Leu Gln Lys Ile Arg Tyr Tyr His Asn Asp Leu Asn Gly Leu  
 100 105 110  
 Pro Glu Gln Leu Thr Glu Val Asp Gly  
 115 120

<210> 1293  
 <211> 340  
 <212> DNA  
 <213> Homo sapiens

<400> 1293  
 nngccggccg cccgagagct gtctgaggcg tgccgcaacg gggacgtgga acgagtcaag  
 60  
 aggtcgtgga cgcctgagaa ggtgaacagc cgcgacacgg cgggcaggaa atccaccccg  
 120  
 ctgcacttcg ccgcagggtt tgggcggaaa gacgtagtgt aatatttgct tcagaatggt  
 180  
 gcaaagtgtc aagcacgtga tgatgggggc cttattcctc ttcataatgc atgctctttt  
 240  
 ggtcatgctg aagtagtcaa tctccttttg cgacatgggt cagaccccaa tgcttgagat  
 300  
 aattggaatt atactcctag aggggtggagt gtgctcgcga  
 340

<210> 1294  
 <211> 98  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 1294

Xaa Pro Ala Ala Arg Glu Leu Phe Glu Ala Cys Arg Asn Gly Asp Val  
 1 5 10 15  
 Glu Arg Val Lys Arg Leu Val Thr Pro Glu Lys Val Asn Ser Arg Asp  
 20 25 30  
 Thr Ala Gly Arg Lys Ser Thr Pro Leu His Phe Ala Ala Gly Phe Gly  
 35 40 45  
 Arg Lys Asp Val Val Glu Tyr Leu Leu Gln Asn Gly Ala Asn Val Gln  
 50 55 60  
 Ala Arg Asp Asp Gly Gly Leu Ile Pro Leu His Asn Ala Cys Ser Phe  
 65 70 75 80  
 Gly His Ala Glu Val Val Asn Leu Leu Arg His Gly Ala Asp Pro  
 85 90 95  
 Asn Ala

&lt;210&gt; 1295

&lt;211&gt; 351

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1295

ggatcccgga gacctcgteg gcgaacgtca cctcgcccag ggccgaggcg cggaacaccg  
 60  
 acgtgtcgat gccctcgccc tcgatgcagt cggtcagcgg tacgacggcg ccgcgggagg  
 120  
 cgaagggtgcc gatctggctg cgctcggcgt agaccagcga cggcgggttcg cccgacgcca  
 180  
 cggaggagag gaactgctgg atgtcgaggt caccctcgat cagcttgacc ttggcgtcgc  
 240  
 cgagctcctc ctctgcccgg tcgagccgca ccgtcgcgat ctgctcgccg gcaccgaagc  
 300  
 ccatcacctc gacctcgccg gagagcttcg ccccgtgtc gaaagacgcg t  
 351

&lt;210&gt; 1296

&lt;211&gt; 75

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1296

Gly Ser Arg Arg Pro Arg Arg Arg Thr Ser Pro Arg Pro Gly Pro Arg  
 1 5 10 15  
 Arg Gly Thr Pro Thr Cys Arg Cys Pro Arg Pro Arg Cys Ser Arg Ser  
 20 25 30  
 Ala Val Arg Arg Arg Gly Arg Arg Arg Cys Arg Ser Gly Cys Ala  
 35 40 45  
 Arg Arg Arg Pro Ala Thr Ala Val Arg Pro Thr Pro Arg Arg Arg Gly  
 50 55 60  
 Thr Ala Gly Cys Arg Gly His Pro Arg Ser Ala  
 65 70 75

&lt;210&gt; 1297

&lt;211&gt; 356

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1297

gtgcacccgg attcccattg ccaccgactt cgagtaaact ccagtcccga ggacacgaga  
60  
gacacccagg cctcaggccc catgggcacg ctccacgcca cggctcctac cagagggaca  
120  
gatacactct acaaattctcg gggcccacca caccaagaag acacggagga gccaaacaaa  
180  
gaaggaccat acgaaatgca cccccaagc aaccaacaa tccaagaaaa aatacgtctc  
240  
agggttctgt gggccctctt gcatgggctg ccttgccccc ctgttctggc ctgggtcaag  
300  
caccttacct cagcctgctc gaaagagccc tggctaccag agcagagcac tggcct  
356

&lt;210&gt; 1298

&lt;211&gt; 91

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1298

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gly | Thr | Leu | His | Ala | Thr | Ala | Pro | Thr | Arg | Gly | Thr | Asp | Thr | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Tyr | Lys | Ser | Arg | Gly | Pro | Pro | His | Gln | Glu | Asp | Thr | Glu | Glu | Pro | Thr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Lys | Glu | Gly | Pro | Tyr | Glu | Met | His | Pro | Gln | Ser | Asn | Gln | Pro | Ile | Gln |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Glu | Lys | Ile | Arg | Leu | Arg | Val | Leu | Trp | Ala | Leu | Leu | His | Gly | Leu | Pro |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Cys | Pro | Pro | Val | Leu | Ala | Trp | Leu | Lys | His | Leu | Thr | Pro | Ala | Cys | Ser |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Lys | Glu | Pro | Trp | Leu | Pro | Glu | Gln | Ser | Thr | Gly |     |     |     |     |     |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     |     |

&lt;210&gt; 1299

&lt;211&gt; 307

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1299

ggatccactt ctaagatgtc tcactcacgt ggtgatggca gcaggcctca gactctggtg  
60  
gttggtggca ggatgtctca gttccttgcc atgtgggtct ctacacaggg cagcttctctg  
120  
tgtctttgccc atatggcaac tgagaatgat cttggctacc ttctccagcc cgggagtcgg  
180  
gagttttctg ggggtggggtc acgggtcttg cccggagttc gccctggcaa aggcctgtgc  
240  
cagtgatcct ggagcggagc gaagtgtttc cgtgactctg cagccgcagt tcttagggct  
300  
tccttag  
307



<210> 1300  
 <211> 90  
 <212> PRT  
 <213> Homo sapiens

<400> 1300  
 Met Ala Ala Gly Leu Arg Leu Trp Trp Leu Leu Ala Gly Cys Leu Ser  
           1                  5                  10                  15  
 Ser Leu Pro Cys Gly Ser Leu His Arg Ala Ala Ser Cys Val Phe Ala  
                   20                  25                  30  
 Ile Trp Gln Leu Arg Met Ile Leu Ala Thr Phe Ser Ser Pro Gly Val  
           35                  40                  45  
 Gly Ser Phe Leu Gly Trp Gly His Gly Ser Cys Pro Glu Phe Ala Leu  
           50                  55                  60  
 Ala Lys Ala Cys Ala Ser Asp Pro Gly Ala Glu Arg Ser Val Ser Val  
           65                  70                  75                  80  
 Thr Leu Gln Pro Gln Phe Leu Gly Leu Pro  
                   85                  90

<210> 1301  
 <211> 408  
 <212> DNA  
 <213> Homo sapiens

<400> 1301  
 ctgagcaagt taaaagaagt tcttgaattt tataacttta ttttgacaaa ctattataaa  
 60  
 gttgagccta tttcctttga tgcagtatac gctgaagggt tggaaatggc tgagttcttg  
 120  
 cgccctatgg tgtcagatac gattacactt ttgcatgacc ttagaagggtc tggcgcaaac  
 180  
 atcatgtttg aaggcgcgca agggctctttg ttggatgttg atcatggtac ttaccggtat  
 240  
 gtgacttcat ctaatacgac tgcgggcgga gcgccagcgg gaacagggtt tggctccttg  
 300  
 tacttagatt atgtattagg tatcactaag gcttatacga ctgcggttgg ttctggacct  
 360  
 ttcctactg agttgtttga cgaagatggt gagcgtcttg gtacgcgt  
 408

<210> 1302  
 <211> 136  
 <212> PRT  
 <213> Homo sapiens

<400> 1302  
 Leu Ser Lys Leu Lys Glu Val Leu Glu Phe Tyr Asn Phe Ile Leu Thr  
           1                  5                  10                  15  
 Asn Tyr Tyr Lys Val Glu Pro Ile Ser Phe Asp Ala Val Tyr Ala Glu  
                   20                  25                  30  
 Gly Leu Glu Met Ala Glu Phe Leu Arg Pro Met Val Ser Asp Thr Ile  
           35                  40                  45  
 Thr Leu Leu His Asp Leu Arg Arg Ser Gly Ala Asn Ile Met Phe Glu

```

      50              55              60
Gly Ala Gln Gly Ser Leu Leu Asp Val Asp His Gly Thr Tyr Pro Tyr
65              70              75              80
Val Thr Ser Ser Asn Thr Thr Ala Gly Gly Ala Pro Ala Gly Thr Gly
      85              90              95
Phe Gly Pro Leu Tyr Leu Asp Tyr Val Leu Gly Ile Thr Lys Ala Tyr
      100              105              110
Thr Thr Arg Val Gly Ser Gly Pro Phe Pro Thr Glu Leu Phe Asp Glu
      115              120              125
Asp Gly Glu Arg Leu Gly Thr Arg
      130              135

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&lt;210&gt; 1303

&lt;211&gt; 1037

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1303

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<210> 1304  
 <211> 132  
 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Met Pro Ser Pro Leu Arg Pro Gln Gly Ser Ala Gly Val Leu Pro Glu  
 50 55 60  
 Pro Arg Val Pro Val Gln Lys Pro Gly Ile Asn Ala Ala Ser Pro Ile  
 65 70 75 80  
 Gly Thr Val Arg Val Glu Arg Gly Arg Pro Thr Val Ser Pro Ala Gly  
 85 90 95  
 Arg Gly Ser Pro Arg Gly Gly His Val Gly Gly Leu Thr Ala Pro Ser  
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<210> 1305  
 <211> 775  
 <212> DNA  
 <213> Homo sapiens

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 <212> PRT  
 <213> Homo sapiens

<400> 1306  
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 35 40 45  
 Asp Ala Asp Gly His Trp Val Ser Gly Thr Phe Asp Thr Ser Trp Glu  
 50 55 60  
 Arg Leu Asp Ala Ala Ala Met Gly Phe Asp Val Val Tyr Leu Pro  
 65 70 75 80  
 Ala Ile His Pro Met Gly Gln Ala Phe Arg Lys Gly Lys Asp Asn Thr  
 85 90 95  
 Leu Thr Pro Gly Pro Asp Asp Pro Gly Ser Pro Trp Ala Ile Gly Ser  
 100 105 110  
 Ser Asp Gly Gly His Asp Thr Ile His Pro Asp Leu Gly Thr Phe Asp  
 115 120 125  
 Asp Leu Asp Arg Phe Val Ala His Ala His Asp Leu Gly Met Glu Val  
 130 135 140  
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 145 150 155 160  
 Gln His Pro Glu Trp Phe Thr Thr Arg Val Asp Gly Thr Ile Ala Tyr  
 165 170 175  
 Ala Glu Asn Ser Pro Lys Lys Tyr Gln Asp Ile Tyr Pro Ile Asn Phe  
 180 185 190  
 Asp Asn Asp Pro Asp Gly Ile Tyr Gln Glu Cys Leu Arg Leu Leu Glu  
 195 200 205  
 Leu Trp Ile Ser His Gly Val Thr Ile Phe Arg Val Asp Asn Pro His  
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 Thr Lys Pro Leu Asn Phe Trp Ala Trp Leu Met Glu Gln Val His Arg  
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<210> 1307  
 <211> 624  
 <212> DNA  
 <213> Homo sapiens

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 420  
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<210> 1308  
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 <212> PRT  
 <213> Homo sapiens

<400> 1308  
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 35 40 45  
 Arg Gly Ala Leu Ala Ser Gly Cys Gly Thr Glu His Val Glu Trp Leu  
 50 55 60  
 Trp Ser Ser Thr Ala Gln Ala Gln Gly Pro Asp Arg Met Cys Pro Ala  
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 Ser Leu Thr Ser Pro Glu Val Gly Cys Arg Glu Pro Gly Ala Trp His  
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 Ser Pro Pro Ala  
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<210> 1309  
 <211> 563  
 <212> DNA  
 <213> Homo sapiens

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 420  
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 480  
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<210> 1310

<211> 183

<212> PRT

<213> Homo sapiens

<400> 1310

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Ile | Ile | Ala | Asn | His | Gln | Ser | Asn | Tyr | Asp | Leu | Phe | Val | Phe | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Thr | Gly | Val | Pro | Tyr | Arg | Thr | Val | Cys | Ile | Gly | Lys | Lys | Ser | Leu | Lys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Trp | Val | Pro | Leu | Phe | Gly | Gln | Leu | Phe | Trp | Leu | Ala | Gly | Asn | Val | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ile | Asp | Arg | Gly | Asn | Ala | His | Lys | Ala | Arg | Arg | Ser | Met | Leu | Thr | Thr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Thr | His | Thr | Leu | Gln | His | Lys | Asp | Thr | Ser | Ile | Trp | Val | Phe | Ala | Glu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Gly | Thr | Arg | Asn | Phe | Gly | Glu | Thr | Leu | Leu | Pro | Phe | Lys | Lys | Gly | Ala |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Phe | Gln | Met | Ala | Ile | Ala | Ala | Gly | Val | Pro | Ile | Val | Gln | Val | Cys | Val |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Ser | Thr | Tyr | Val | Lys | His | Met | Lys | Leu | Asn | Arg | Trp | Asp | Ser | Gly | Asp |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Ile | Leu | Ile | Arg | Ser | Leu | Pro | Pro | Ile | Pro | Thr | Thr | Gly | Leu | Thr | Leu |
|     | 130 |     |     |     |     | 135 |     |     |     |     |     | 140 |     |     |     |
| Asp | Asp | Met | Pro | Arg | Leu | Met | Glu | Thr | Cys | Arg | Gln | Gln | Met | Arg | Glu |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Cys | Ile | Glu | Ala | Met | Asp | Arg | Glu | Leu | Glu | Ile | Val | Pro | Cys | Arg | Asn |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Glu | Leu | Ala | Arg | Glu | Gly | Arg |     |     |     |     |     |     |     |     |     |
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<210> 1311

<211> 674

<212> DNA

<213> Homo sapiens

<400> 1311

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 180  
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 674

<210> 1312

<211> 196

<212> PRT

<213> Homo sapiens

<400> 1312

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| Met | Asp | Gly | Gly | Pro | Gln | Gln | Gly | Ser | Thr | Glu | His | Pro | Gly | Gly | Gln |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Arg | Thr | Glu | Asp | Pro | Pro | Arg | Gly | Pro | Lys | Gln | Val | Gln | Gly | Ser | Arg |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gln | Asp | Pro | Ala | Cys | Glu | Pro | His | Arg | Asp | Asn | Arg | Gly | Asp | His | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ala | Tyr | Gln | Gly | Gly | Gln | His | Cys | Gly | Ser | His | Leu | His | Lys | Asp | Asp |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Leu | Val | His | Pro | Thr | Pro | Ala | Gln | Ser | Asp | Ala | Phe | Glu | Ala | Gly | His |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Gln | Ile | Thr | Val | Gly | Gly | Ser | Leu | Leu | Leu | Arg | Gln | Gln | Ala | Arg | His |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Asp | Gly | Arg | Gln | His | Asp | Glu | Gly | Asp | Gly | Arg | Asp | Asp | Gly | Asp | Arg |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Trp | Gln | Arg | Asp | Ile | Thr | Glu | Asp | Ser | Gly | Gly | His | Asp | Ile | Lys | Phe |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Pro | Gln | Pro | Val | Arg | Leu | Arg | Pro | Leu | Val | Gly | Gln | Ser | Ile | Leu | Ile |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Gly | Gly | Gln | Pro | Cys | Glu | Gln | Asn | Arg | Arg | Ser | Ser | Ala | Ser | Trp | Tyr |
| 145 |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     | 160 |     |
| Ser | Gly | Phe | Arg | Arg | Pro | Gly | Asp | Ala | Leu | Asp | Pro | Ala | Gln | Ile | Ile |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Arg | Gln | Pro | Asp | Gly | Val | Cys | Arg | Val | Gly | Pro | Gly | Gly | Ile | Ile | Gly |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Gln | Val | Pro | Ala |     |     |     |     |     |     |     |     |     |     |     |     |

195

<210> 1313  
 <211> 367  
 <212> DNA  
 <213> Homo sapiens

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<210> 1314  
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 <212> PRT  
 <213> Homo sapiens

<400> 1314  
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 35 40 45  
 Ser Ser Ser Arg Ala Pro Leu Leu Ala Lys Thr Pro Leu Ser Thr Ser  
 50 55 60  
 Tyr Thr His Gln Lys Pro Arg Ser His Thr Arg Leu Cys Pro Leu Pro  
 65 70 75 80  
 Ser Leu Pro Pro Pro Ser Ile Leu Ser Pro Lys Ser Arg Asp Cys Pro  
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 Ala Thr Trp Arg Gly Cys Met Asp Ile  
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<210> 1315  
 <211> 5245  
 <212> DNA  
 <213> Homo sapiens

<400> 1315  
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1620  
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1680

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1740  
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1860  
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1980  
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2160  
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2220  
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2280  
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2400  
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2460  
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2520  
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2580  
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2640  
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 <213> Homo sapiens

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 Gly Leu Pro Gln Gly Arg Asp Thr Thr Gln Leu Leu Ala Ser Glu Met  
 115 120 125  
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 130 135 140  
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 145 150 155 160  
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 Ser Pro Leu Arg Glu Glu Ala Ala Gly Ala Glu Asp Glu Lys Val Tyr  
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 Thr Asp Arg Ala Lys Glu Lys Glu Ser Gln Lys Thr Asp Gly Gln Arg  
 195 200 205  
 Ser Lys Ser Leu Ala Asp Ile Lys Glu Ser Met Glu Asn Pro Gln Ala  
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 Lys Trp Leu Lys Ser Pro Thr Thr Pro Ile Asp Pro Glu Lys Gln Trp  
 225 230 235 240  
 Asn Leu Ala Ser Pro Ser Glu Glu Thr Leu Asn Glu Gly Glu Ile Leu  
 245 250 255  
 Glu Tyr Thr Lys Ser Ile Glu Lys Leu Asn Ser Ser Leu His Phe Leu  
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| 275   | 280 | 285 |
| Met Arg Glu Gln Gln Ser Trp Val Ile Ser Pro Pro Gln Pro Ser Pro |     |     |
| 290   | 295 | 300 |
| Gln Lys Gln Ile Arg Asp Phe Lys Pro Ser Lys Gln Ala Gly Leu Ser |     |     |
| 305   | 310 | 315 |
| Ser Ala Ile Ala Pro Phe Ser Ser Asp Ser Pro Arg Pro Thr His Pro |     |     |
| 325   | 330 | 335 |
| Ser Pro Gln Ser Ser Asn Arg Lys Ser Ala Ser Phe Ser Val Lys Ser |     |     |
| 340   | 345 | 350 |
| Gln Arg Thr Pro Arg Pro Asn Glu Leu Lys Ile Thr Pro Leu Asn Arg |     |     |
| 355   | 360 | 365 |
| Thr Leu Thr Pro Pro Arg Ser Val Asp Ser Leu Pro Arg Leu Arg Arg |     |     |
| 370   | 375 | 380 |
| Phe Ser Pro Ser Gln Val Pro Ile Gln Thr Arg Ser Phe Val Cys Phe |     |     |
| 385   | 390 | 395 |
| Gly Asp Asp Gly Glu Pro Gln Leu Lys Glu Ser Lys Pro Lys Glu Glu |     |     |
| 405   | 410 | 415 |
| Val Lys Lys Glu Glu Leu Glu Ser Lys Gly Thr Leu Glu Gln Arg Gly |     |     |
| 420   | 425 | 430 |
| His Asn Pro Glu Glu Lys Glu Ile Lys Pro Phe Glu Ser Thr Val Ser |     |     |
| 435   | 440 | 445 |
| Glu Val Leu Ser Leu Pro Val Thr Glu Thr Val Cys Leu Thr Pro Asn |     |     |
| 450   | 455 | 460 |
| Glu Asp Gln Leu Asn Gln Pro Thr Glu Pro Pro Pro Lys Pro Val Phe |     |     |
| 465   | 470 | 475 |
| Pro Pro Thr Ala Pro Lys Asn Val Asn Leu Ile Glu Val Ser Leu Ser |     |     |
| 485   | 490 | 495 |
| Asp Leu Lys Pro Pro Glu Lys Ala Asp Val Pro Val Glu Lys Tyr Asp |     |     |
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| Gly Glu Ser Asp Lys Glu Gln Phe Asp Asp Asp Gln Lys Val Cys Cys |     |     |
| 515   | 520 | 525 |
| Gly Phe Phe Phe Lys Asp Asp Gln Lys Ala Glu Asn Asp Met Ala Met |     |     |
| 530   | 535 | 540 |
| Lys Arg Ala Ala Leu Leu Glu Lys Arg Leu Arg Arg Glu Lys Glu Thr |     |     |
| 545   | 550 | 555 |
| Gln Leu Arg Lys Gln Gln Leu Glu Ala Glu Met Glu His Lys Lys Glu |     |     |
| 565   | 570 | 575 |
| Glu Thr Arg Arg Lys Thr Glu Glu Glu Arg Gln Lys Lys Glu Asp Glu |     |     |
| 580   | 585 | 590 |
| Arg Ala Arg Arg Glu Phe Ile Arg Gln Glu Tyr Met Arg Arg Lys Gln |     |     |
| 595   | 600 | 605 |
| Leu Lys Leu Met Glu Asp Met Asp Thr Val Ile Lys Pro Arg Pro Gln |     |     |
| 610   | 615 | 620 |
| Val Val Lys Gln Lys Lys Gln Arg Pro Lys Ser Ile His Arg Asp His |     |     |
| 625   | 630 | 635 |
| Ile Glu Ser Pro Lys Thr Pro Ile Lys Gly Pro Pro Val Ser Ser Leu |     |     |
| 645   | 650 | 655 |
| Ser Leu Ala Ser Leu Asn Thr Gly Asp Asn Glu Ser Val His Ser Gly |     |     |
| 660   | 665 | 670 |
| Lys Arg Thr Pro Arg Ser Glu Ser Val Glu Gly Phe Leu Ser Pro Ser |     |     |
| 675   | 680 | 685 |
| Arg Cys Gly Ser Arg Asn Gly Glu Lys Asp Trp Glu Asn Ala Ser Thr |     |     |
| 690   | 695 | 700 |
| Thr Ser Ser Val Ala Ser Gly Thr Glu Tyr Thr Gly Pro Lys Leu Tyr |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 705 |     | 710 |     | 715 |     | 720 |     |     |     |     |     |     |     |     |     |
| Lys | Glu | Pro | Ser | Ala | Lys | Ser | Asn | Lys | His | Ile | Ile | Gln | Asn | Ala | Leu |
|     |     |     |     | 725 |     |     |     |     | 730 |     |     |     |     | 735 |     |
| Ala | His | Cys | Cys | Leu | Ala | Gly | Lys | Val | Asn | Glu | Gly | Gln | Lys | Lys | Lys |
|     |     |     | 740 |     |     |     |     | 745 |     |     |     |     | 750 |     |     |
| Ile | Leu | Glu | Glu | Met | Glu | Lys | Ser | Asp | Ala | Asn | Asn | Phe | Leu | Ile | Leu |
|     |     | 755 |     |     |     |     | 760 |     |     |     |     | 765 |     |     |     |
| Phe | Arg | Asp | Ser | Gly | Cys | Gln | Phe | Arg | Ser | Leu | Tyr | Thr | Tyr | Cys | Pro |
|     | 770 |     |     |     |     | 775 |     |     |     |     | 780 |     |     |     |     |
| Glu | Thr | Glu | Glu | Ile | Asn | Lys | Leu | Thr | Gly | Ile | Gly | Pro | Lys | Ser | Ile |
| 785 |     |     |     |     | 790 |     |     |     | 795 |     |     |     |     | 800 |     |
| Thr | Lys | Lys | Met | Ile | Glu | Gly | Leu | Tyr | Lys | Tyr | Asn | Ser | Asp | Arg | Lys |
|     |     |     | 805 |     |     |     |     | 810 |     |     |     |     |     | 815 |     |
| Gln | Phe | Ser | His | Ile | Pro | Ala | Lys | Thr | Leu | Ser | Ala | Ser | Val | Asp | Ala |
|     |     |     | 820 |     |     |     |     | 825 |     |     |     |     | 830 |     |     |
| Ile | Thr | Ile | His | Ser | His | Leu | Trp | Gln | Thr | Lys | Arg | Pro | Val | Thr | Pro |
|     |     | 835 |     |     |     | 840 |     |     |     |     |     | 845 |     |     |     |
| Lys | Lys | Leu | Leu | Pro | Thr | Lys | Ala |     |     |     |     |     |     |     |     |
|     | 850 |     |     |     |     | 855 |     |     |     |     |     |     |     |     |     |

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 <212> DNA  
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 <212> PRT  
 <213> Homo sapiens

<400> 1318  
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 35 40 45  
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 65 70 75 80  
 Leu Ala Thr Thr Val Pro Glu Ser Ala Glu Pro Glu Ala Glu Ala Asp  
 85 90 95  
 Gly Glu Glu Leu Asp Gly Ser Asp Met Ser Ala Ile Ile Tyr Glu Ile  
 100 105 110  
 Pro Lys Glu Pro Glu Lys Arg Arg Arg Ser Lys Arg Ser Arg Val Met  
 115 120 125  
 Asp Ala Asp Gly Leu Leu Glu Met Phe His Cys Pro Tyr Glu Gly Cys  
 130 135 140  
 Ser Gln Val Tyr Val Ala Leu Ser Ser Phe Gln Asn His Val Asn Leu  
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 Val His Arg Lys Gly Lys Thr Lys Val Cys Pro His Pro Gly Cys Gly  
 165 170 175  
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 180 185 190  
 Ser Gly Val Arg Glu Phe Thr Cys Glu Thr Cys Gly Lys Ser Phe Lys  
 195 200 205  
 Arg Lys Asn His Leu Glu Val His Arg Arg Thr His Thr Gly Glu Thr  
 210 215 220  
 Pro Leu Gln Cys Val Ile Cys Gly Tyr Gln Cys Arg Gln Arg Ala Ser  
 225 230 235 240  
 Leu Asn Trp His Met Lys Lys His Thr Ala Glu Val Gln Tyr Asn Phe  
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 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Glu Ser Gly Val Asp Ala Lys Ser Glu Ser Ser Trp Gly Gly Thr Gln  
 50 55 60  
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 85 90 95  
 Pro Ser Leu Leu Pro Ser Phe Trp Lys Pro Ser Thr Gly Gly Asn Thr  
 100 105 110  
 His Arg Trp Asp Ala Gly Ile Arg Glu Ala His Arg Ser Cys His Ala  
 115 120 125  
 Ala Gly Val Cys Leu Ile Gln Glu Arg Gly His Ala Pro Arg Gly Val  
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<212> DNA  
<213> Homo sapiens

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<210> 1322  
<211> 317  
<212> PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1322

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Pro Gly His Val Ile Val Lys Lys Ile Tyr Asn Asn Asn Val Leu Leu
      35           40           45
Gly Val Asn Gly Ser Gly Thr Glu Met Val Val Asn Ala Arg Gly Ile
      50           55           60
Ala Tyr Gly Arg His Arg Gly Glu Ile Val Asp Ala Ser Ser Ala Gln
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Arg Tyr Val Ala Glu Gly Ala Tyr Arg Thr Thr Ala Ile Ala Ser Leu
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Glu Leu Ala Arg Glu Glu Leu Gly Thr Pro His Ala Arg Arg Met Met
      115          120          125
Leu Pro Ile Leu Asp His Leu Val Ala Ala Val His Arg Ala Lys Gln
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Gly Ala Val Ile Asp Phe Pro Leu Glu Trp Glu Val Arg Gln Leu Tyr
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Pro Asp Glu Ala Glu Leu Gly Arg Arg Ala Val Glu Ile Val Asp Gly
      165          170          175
Ala Leu Glu Ile His Leu Gln Pro Glu Glu Trp Val Ala Phe Ser Leu
      180          185          190
His Phe Ile Asn Gln Arg Trp Asp Ser Arg Asp Val Ser Arg Thr Met
      195          200          205
Ser Met Thr Gln Thr Ile Cys Asp Val Phe Thr Glu Leu Glu Asp Leu
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Trp His Val Glu Ile Asp Arg Ser Ser Met Ser Ala Ser Arg Phe Val
      225          230          235          240
Thr His Leu Arg Tyr Leu Phe Ala Arg Ala Ser Asp Asn Lys Gln Leu
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Ser His Val Asp Leu Asp Ile Val Gly Leu Met Ser Asp Arg Tyr Pro
      260          265          270
Glu Ala Thr Leu Ala Ala Ser Gln Val Ala Glu His Ile Ser Lys Ala
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&lt;210&gt; 1323

&lt;211&gt; 306

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1323

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120

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 <211> 102  
 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Gly Val His Val Ile Thr Val Asn Asp Tyr Leu Ala Gln Arg Asp Ala  
 50 55 60  
 Glu Leu Asn Arg Pro Leu Phe Glu Phe Leu Gly Leu Ser Ile Gly Val  
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 Asp Ile Thr Tyr Gly Thr  
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 <213> Homo sapiens

<400> 1325  
 gtgcacatgg gccactggc gaatccgacg cgcggcctac ggcgcgcaat actggcggcc  
 60  
 attgtcgccg catgttccgt ctccgctcat gccggaagct ggccagagaa accgatcacg  
 120  
 atggctgtgc cgtttcccgc cggaggcggc accgatctcg tggcgcgctc gatccagccg  
 180  
 cttttgcagc gcgaactcgg acaaccgggtg gtgatcgaca accgcagcgg cgcaggcggc  
 240  
 acgctcggct ccagcttcgt ggcgcggggc gttgccgacg gctacacggc tggcgtggtc  
 300  
 accacgagca cccacgcggg aagcgtcgcg ctctatcccc ggctggccta caaccgcaca  
 360  
 gcggactttg catacgccgg cttcatcggc n  
 391

<210> 1326  
 <211> 130  
 <212> PRT

<213> Homo sapiens

<400> 1326

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Val His Met Gly Pro Leu Ala Asn Pro Thr Arg Gly Leu Arg Arg Ala
 1           5           10           15
Ile Leu Ala Ala Ile Val Ala Ala Cys Ser Val Ser Ala His Ala Gly
 20           25           30
Ser Trp Pro Glu Lys Pro Ile Thr Met Val Val Pro Phe Pro Ala Gly
 35           40           45
Gly Gly Thr Asp Leu Val Ala Arg Ser Ile Gln Pro Leu Leu Gln Arg
 50           55           60
Glu Leu Gly Gln Pro Val Val Ile Asp Asn Arg Ser Gly Ala Gly Gly
 65           70           75           80
Thr Leu Gly Ser Ser Phe Val Ala Arg Ala Val Ala Asp Gly Tyr Thr
 85           90           95
Ala Gly Val Val Thr Thr Ser Thr His Ala Val Ser Val Ala Leu Tyr
 100          105          110
Pro Arg Leu Ala Tyr Asn Pro Thr Ala Asp Phe Ala Tyr Ala Gly Phe
 115          120          125
Ile Gly
 130

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<210> 1327

<211> 324

<212> DNA

<213> Homo sapiens

<400> 1327

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nnacgcgtga ttctggaact gcagcagttc gagcagtcgc atggacagag cgacgggagc
60
tactggctat ggttcgagct gctgtggcga gactatttcc gctttctgca tcttcggcat
120
ggcgctcggc tgtaccgcgc acgcggcctc gcaaattgagg tacggcacgc ggagcgccca
180
gatgtgcagg gcttcgagcg ctggcgctcg gcacgcaccg gcgagccgct cgctgatgcc
240
gcgatgcgcg agctggagac caccggctac ctcagcaaca ggctcagaca ggtggtcgcg
300
agctacctcg tgcacgagct ggga
324

```

<210> 1328

<211> 108

<212> PRT

<213> Homo sapiens

<400> 1328

```

Xaa Arg Val Ile Ser Glu Leu Gln Gln Phe Glu Gln Ser His Gly Gln
 1           5           10           15
Ser Asp Gly Ser Tyr Trp Leu Trp Phe Glu Leu Leu Trp Arg Asp Tyr
 20           25           30
Phe Arg Phe Leu His Leu Arg His Gly Ala Arg Leu Tyr Arg Ala Arg
 35           40           45
Gly Leu Ala Asn Glu Val Arg His Ala Glu Arg Pro Asp Val Gln Gly

```

```

      50              55              60
Phe Glu Arg Trp Arg Arg Ala Ser Thr Gly Glu Pro Leu Val Asp Ala
65              70              75              80
Ala Met Arg Glu Leu Glu Thr Thr Gly Tyr Leu Ser Asn Arg Leu Arg
      85              90              95
Gln Val Val Ala Ser Tyr Leu Val His Glu Leu Gly
      100              105

```

<210> 1329  
 <211> 438  
 <212> DNA  
 <213> Homo sapiens

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<400> 1329
ngtgcacgct tagcattaga tttagcttcc agtggcaaaa ctacgtcggt gatttcaagc
60
ggcgatatcg gcatttacgc gatggcgacc ctggtgtttg aactgctgga tagacaactc
120
cagggccttg aagaccatcc tgaatggta gatgttgaaa tcgatgtggt acctggcatc
180
tctgcaatgc aagctgggtgc aagtcgtatt ggtgcatgt taggtcatga cttttgtacg
240
gtgagtttgt ctgatttatt aacccttgg gaaactatta ataaacgtat tcatagtgc
300
ggtgaggggg attttgttat ctctttttat aaccctgttt ctaagaaacg tgattggcag
360
cttaaccacg cgcgatgatg attattgaaa taccgtccag catcaacgcc agttttatta
420
ggtcgtcagt tgacgcgt
438

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<210> 1330  
 <211> 146  
 <212> PRT  
 <213> Homo sapiens

```

<400> 1330
Xaa Ala Arg Leu Ala Leu Asp Leu Ala Ser Ser Gly Lys Thr Thr Ser
1              5              10              15
Leu Ile Ser Ser Gly Asp Ile Gly Ile Tyr Ala Met Ala Thr Leu Val
      20              25              30
Phe Glu Leu Leu Asp Arg Gln Leu Gln Gly Leu Glu Asp His Pro Glu
      35              40              45
Trp Leu Asp Val Glu Ile Asp Val Val Pro Gly Ile Ser Ala Met Gln
      50              55              60
Ala Gly Ala Ser Arg Ile Gly Ala Met Leu Gly His Asp Phe Cys Thr
65              70              75              80
Val Ser Leu Ser Asp Leu Leu Thr Pro Trp Glu Thr Ile Asn Lys Arg
      85              90              95
Ile His Ser Ala Gly Glu Gly Asp Phe Val Ile Ser Phe Tyr Asn Pro
      100              105              110
Val Ser Lys Lys Arg Asp Trp Gln Leu Asn His Ala Arg Asp Val Leu
      115              120              125
Leu Lys Tyr Arg Pro Ala Ser Thr Pro Val Leu Leu Gly Arg Gln Leu

```

130 135 140  
 Thr Arg  
 145  
  
 <210> 1331  
 <211> 453  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 1331  
 gcgtaccgct ccgcggaact ggtgatgatg accgaggcac cgggatgcgg aatcccctgg  
 60  
 catcttctgg ccggcatcgg acgcatcgaa tccggtcacg ccaacggcgg caagacgacc  
 120  
 tcggtgggta cgaacgtcac cccgatcctc ggcccatcc tcgacggacg gctggcaggc  
 180  
 aacgaagtca ttcgggacac cgacaagggc aatcgacggc gaccactca cgaccgcgcc  
 240  
 gtcggggccga tgcagttcat tccggccacc tgggccggat atgccagcga cggcaacggg  
 300  
 gacggaatca aggaccccaa caacgtcttc gatgcggcac tctcggcagc gaagtacctc  
 360  
 tgcagcggcg gactcaacct gcgcgatgtc gcccaggaga ccaaagctgt tctgcgatac  
 420  
 aacaactcgg ccgcttacgc agcaaactgtg atc  
 453  
  
 <210> 1332  
 <211> 151  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 1332  
 Ala Tyr Arg Ser Ala Glu Leu Val Met Met Thr Glu Ala Pro Gly Cys  
 1 5 10 15  
 Gly Ile Pro Trp His Leu Leu Ala Gly Ile Gly Arg Ile Glu Ser Gly  
 20 25 30  
 His Ala Asn Gly Gly Lys Thr Thr Ser Val Gly Thr Asn Val Thr Pro  
 35 40 45  
 Ile Leu Gly Pro Ile Leu Asp Gly Arg Leu Ala Gly Asn Glu Val Ile  
 50 55 60  
 Arg Asp Thr Asp Lys Gly Asn Arg Arg Arg Pro Thr His Asp Arg Ala  
 65 70 75 80  
 Val Gly Pro Met Gln Phe Ile Pro Ala Thr Trp Ala Gly Tyr Ala Ser  
 85 90 95  
 Asp Gly Asn Gly Asp Gly Ile Lys Asp Pro Asn Asn Val Phe Asp Ala  
 100 105 110  
 Ala Leu Ser Ala Ala Lys Tyr Leu Cys Ser Gly Gly Leu Asn Leu Arg  
 115 120 125  
 Asp Val Ala Gln Glu Thr Lys Ala Val Leu Arg Tyr Asn Asn Ser Ala  
 130 135 140  
 Ala Tyr Ala Ala Asn Val Ile  
 145 150

<210> 1333  
 <211> 540  
 <212> DNA  
 <213> Homo sapiens

<400> 1333  
 acgcgtcgcc cacactgttg ccgccgaggc ggctcgagcc ggggtgtgagg aaggatccgc  
 60  
 ggcacagctc gtcgggtcaag atgggtctag tgctgctcgt atggcggcgg aggcacccgc  
 120  
 gcgaagggtc aaagcggatg gactaagcca gcttgtcatc gatgtcaatg gagacgccgt  
 180  
 cagcgtcgcg acggaatca cccggcctac tcgtctatta gcccttattg gactaaccga  
 240  
 agtacacggc cgggcgagcg aaatgtgtat tttgctggct cgctgaggcc gttgcagcga  
 300  
 tacaatgatg aggtgtctaa gtattttccg gtccaccggg agaaccgcga gcagcgttct  
 360  
 ctcaatcaga tcgtcgacat cctgcacatc ggcggtctta tcgcctaccc gacagacacg  
 420  
 gggtatgcct tcgggtgccg gntagggaaat aaggatgccg tggaccggat tcgcaaactt  
 480  
 cgccagttat ttgacaagca tcacttcacc ctgggtcatga gccagtttgc gcaggttggc  
 540

<210> 1334  
 <211> 70  
 <212> PRT  
 <213> Homo sapiens

<400> 1334  
 Val His Pro Glu Asn Pro Gln Gln Arg Ser Leu Asn Gln Ile Val Asp  
 1 5 10 15  
 Ile Leu His His Gly Gly Leu Ile Ala Tyr Pro Thr Asp Thr Gly Tyr  
 20 25 30  
 Ala Phe Gly Ala Arg Xaa Gly Asn Lys Asp Ala Val Asp Arg Ile Arg  
 35 40 45  
 Lys Leu Arg Gln Leu Phe Asp Lys His His Phe Thr Leu Val Met Ser  
 50 55 60  
 Gln Phe Ala Gln Val Gly  
 65 70

<210> 1335  
 <211> 748  
 <212> DNA  
 <213> Homo sapiens

<400> 1335  
 nctctcatatc tttttttccc tattcctatc cccctctct cgcaccgcgt gaagcgttct  
 60  
 gtgaatgccca agaagaagcg tcgtgaggtc ctcgatcagg cctccgggtta ccgtgggtcag  
 120  
 cgctcgcgcc tgtaccgcaa ggccaaggag cagaccctcc attcggccac ttattcgttc  
 180

cgtgaccgtc gtgctaagaa gggtagcttc cgctcgctgt ggatccagcg catcaatgct  
 240  
 gcttcccggtg cccagggcat gacctacaac cgtttcatca acggtctgaa gaacgctggc  
 300  
 gtcgaggtcg accgcaagat gctcgctgag cttgccgtct ccgacattaa cgccttcaac  
 360  
 agcctggctcg aggtcgctaa ggctagccag ccgcagaacg ctgctgcctg agatggccat  
 420  
 gactggcggg ccgaacgacg actatttggg atgggatcgc atctcgaagg ggtcattgctg  
 480  
 ttcggcccgt cgtctttcat ctccggcgcg acgcatgag tccgggctgt tcttggtaga  
 540  
 aggtgcgtag gcagttcgtg aagccctagc atggccgggt aaagtcaatt tgttggcaac  
 600  
 ctcggaccca gctcgcatg ctgagcatgt cgaggtggct acatgtcgtg gcgttcgggt  
 660  
 cgtgggtgctc actgacgagg atgtcaatgc gctttctgat accgtcacca gtcaggggat  
 720  
 cttcgcggtg tgtcggcagg ttacgcgt  
 748

<210> 1336  
 <211> 136  
 <212> PRT  
 <213> Homo sapiens

<400> 1336  
 Xaa Leu Ile Leu Phe Phe Pro Ile Pro Ile Pro Pro Leu Ser Asp Arg  
 1 5 10 15  
 Val Lys Arg Ser Val Asn Ala Lys Lys Lys Arg Arg Glu Val Leu Asp  
 20 25 30  
 Gln Ala Ser Gly Tyr Arg Gly Gln Arg Ser Arg Leu Tyr Arg Lys Ala  
 35 40 45  
 Lys Glu Gln Thr Leu His Ser Ala Thr Tyr Ser Phe Arg Asp Arg Arg  
 50 55 60  
 Ala Lys Lys Gly Asp Phe Arg Ser Leu Trp Ile Gln Arg Ile Asn Ala  
 65 70 75 80  
 Ala Ser Arg Ala Gln Gly Met Thr Tyr Asn Arg Phe Ile Asn Gly Leu  
 85 90 95  
 Lys Asn Ala Gly Val Glu Val Asp Arg Lys Met Leu Ala Glu Leu Ala  
 100 105 110  
 Val Ser Asp Ile Asn Ala Phe Asn Ser Leu Val Glu Val Ala Lys Ala  
 115 120 125  
 Ser Gln Pro Gln Asn Ala Ala Ala  
 130 135

<210> 1337  
 <211> 364  
 <212> DNA  
 <213> Homo sapiens

<400> 1337  
 acgcgtgagg ccaggccact gggcaccgcc gttagccagg gcagcctcct tcagtgggtca  
 60



aggcagactc agctcatggg cgagcatgtc agtgaagggc acagcaaggc tcacgagtgg  
 120  
 gcctcttgcc tcatggtcag tgtgggtcag tgctttcgct gtagagact acagggtttc  
 180  
 tctgcctcac catgggggac gattgggtct gggtcacttc ctgctgtggg acctgtcctg  
 240  
 ggcaactgcag gatgtggggc agggctccta cgtgccagct accagatgcc agcagcaccc  
 300  
 ccagaagtga caaccacaac catctccagg tgttgccagt gtcccctggg ggtcagagtg  
 360  
 gccc  
 364

<210> 1338  
 <211> 96  
 <212> PRT  
 <213> Homo sapiens

<400> 1338  
 Met Gly Glu His Val Ser Glu Gly His Ser Lys Ala His Glu Trp Ala  
 1 5 10 15  
 Ser Cys Leu Met Val Ser Val Gly Gln Cys Phe Arg Cys Met Arg Leu  
 20 25 30  
 Gln Gly Phe Ser Ala Ser Pro Trp Gly Thr Ile Gly Ser Gly Ser Leu  
 35 40 45  
 Pro Ala Val Gly Pro Val Leu Gly Thr Ala Gly Cys Gly Ala Gly Leu  
 50 55 60  
 Leu Arg Ala Ser Tyr Gln Met Pro Ala Ala Pro Pro Glu Val Thr Thr  
 65 70 75 80  
 Thr Thr Ile Ser Arg Cys Cys Gln Cys Pro Leu Gly Val Arg Val Ala  
 85 90 95

<210> 1339  
 <211> 653  
 <212> DNA  
 <213> Homo sapiens

<400> 1339  
 cgcgttgtct tcaacatcga cgaaaagcag tgcattgacc tggcgacccg tggtagtgag  
 60  
 tgggtcgta ggtacgccga caagtacctc ggcgacgttg agttcggcta cgagtactct  
 120  
 ccggagatgt ttagccagac ccgcacggac ttcgctatcg acgtctgtca ctccgtgatg  
 180  
 gacgtgtggc agccggggcc aggccgtgag attatcctta atctgccggc taccgtcgag  
 240  
 atgagtactc cgaacaccta cgccgaccaa atcgagtact tctgccgcaa tatccgtgat  
 300  
 cgtgagcacg tgtgctctc tttgcacccg cacaatgac gtggcacggc gatcgcggcc  
 360  
 gccgagttcg cgcagatggc gggcgccgat cgcgtcgagg gctgtttctt tggccccggc  
 420  
 gagcgccccg gcaccgtcga cctggtcacc ctgggcatga acctcgtcag ccagggagtt  
 480

gacgccggta tcgacttctc cgacatgccc aagatccgcc gcaccgtcga gtactgcacc  
 540  
 tgtctgccag taccggcccg ccagccctac tccggcgatc tggctcttcac cgccttctcc  
 600  
 gggtcccacc aggacgccat caagaagggt ctggaagacc tggcccggcg cgc  
 653

<210> 1340  
 <211> 217  
 <212> PRT  
 <213> Homo sapiens

<400> 1340  
 Arg Val Val Phe Asn Ile Asp Glu Lys Gln Cys Ile Asp Leu Ala His  
 1 5 10 15  
 Arg Gly Thr Glu Trp Val Val Arg Tyr Ala Asp Lys Tyr Leu Gly Asp  
 20 25 30  
 Val Glu Phe Gly Tyr Glu Tyr Ser Pro Glu Met Phe Ser Gln Thr Arg  
 35 40 45  
 Thr Asp Phe Ala Ile Asp Val Cys His Ser Val Met Asp Val Trp Gln  
 50 55 60  
 Pro Gly Pro Gly Arg Glu Ile Ile Leu Asn Leu Pro Ala Thr Val Glu  
 65 70 75 80  
 Met Ser Thr Pro Asn Thr Tyr Ala Asp Gln Ile Glu Tyr Phe Cys Arg  
 85 90 95  
 Asn Ile Arg Asp Arg Glu His Val Cys Val Ser Leu His Pro His Asn  
 100 105 110  
 Asp Arg Gly Thr Ala Ile Ala Ala Glu Phe Ala Gln Met Ala Gly  
 115 120 125  
 Ala Asp Arg Val Glu Gly Cys Phe Phe Gly Pro Gly Glu Arg Pro Gly  
 130 135 140  
 Thr Val Asp Leu Val Thr Leu Gly Met Asn Leu Val Ser Gln Gly Val  
 145 150 155 160  
 Asp Ala Gly Ile Asp Phe Ser Asp Met Pro Lys Ile Arg Arg Thr Val  
 165 170 175  
 Glu Tyr Cys Thr Cys Leu Pro Val Pro Ala Arg Gln Pro Tyr Ser Gly  
 180 185 190  
 Asp Leu Val Phe Thr Ala Phe Ser Gly Ser His Gln Asp Ala Ile Lys  
 195 200 205  
 Lys Gly Leu Glu Asp Leu Ala Arg Arg  
 210 215

<210> 1341  
 <211> 666  
 <212> DNA  
 <213> Homo sapiens

<400> 1341  
 accggttgct gatttccttg ttggagtctt caccactatg agcagtgact ccattgtttt  
 60  
 gcaaaagtttc ttgccttgct ttgatcatat ttccacaact ggattcccaa cagaagtgtg  
 120  
 gcaatctgta atagaaaagt tggcaaagaa aggattatgg cattcatttc tgcttctgtc  
 180

agcaaaaaaa gaccgattac caagaaatat tcatgtccca gagttatcac tgaaaagtct  
 240  
 ctttgagaaa tacgttttca ttggacttta tgagaagatg gaacaagtgc ccaagttagt  
 300  
 ccagtggctc atctccattg gtgcaagtgt tgagactata ggaccgtatc cccttcatgc  
 360  
 cctcatgcga ctctgtatcc aagccagaga aaaccatctt ttccggtggt taatggatca  
 420  
 caagcccgag tggaaaggcc gcattaacca gaaggatggg gatggctgca ctgtcctgca  
 480  
 cgtcgtcgct gccactccc caggatacct cgtaagcga caaacagagg atgtgcagat  
 540  
 gctcctgcgc tttggggcag atcccacttt gctggatcga cagtctcggt ctggtgtgga  
 600  
 tgtcctgaag aggaataaga acttcaaagc catcgagaaa atcaacagtc acttagaaaa  
 660  
 gctagc  
 666

<210> 1342  
 <211> 209  
 <212> PRT  
 <213> Homo sapiens

<400> 1342  
 Met Ser Ser Asp Ser Ile Val Leu Gln Ser Phe Leu Pro Cys Phe Asp  
 1 5 10 15  
 His Ile Phe Thr Thr Gly Phe Pro Thr Glu Val Trp Gln Ser Val Ile  
 20 25 30  
 Glu Lys Leu Ala Lys Lys Gly Leu Trp His Ser Phe Leu Leu Leu Ser  
 35 40 45  
 Ala Lys Lys Asp Arg Leu Pro Arg Asn Ile His Val Pro Glu Leu Ser  
 50 55 60  
 Leu Lys Ser Leu Phe Glu Lys Tyr Val Phe Ile Gly Leu Tyr Glu Lys  
 65 70 75 80  
 Met Glu Gln Val Pro Lys Leu Val Gln Trp Leu Ile Ser Ile Gly Ala  
 85 90 95  
 Ser Val Glu Thr Ile Gly Pro Tyr Pro Leu His Ala Leu Met Arg Leu  
 100 105 110  
 Cys Ile Gln Ala Arg Glu Asn His Leu Phe Arg Trp Leu Met Asp His  
 115 120 125  
 Lys Pro Glu Trp Lys Gly Arg Ile Asn Gln Lys Asp Gly Asp Gly Cys  
 130 135 140  
 Thr Val Leu His Val Val Ala Ala His Ser Pro Gly Tyr Leu Val Lys  
 145 150 155 160  
 Arg Gln Thr Glu Asp Val Gln Met Leu Leu Arg Phe Gly Ala Asp Pro  
 165 170 175  
 Thr Leu Leu Asp Arg Gln Ser Arg Ser Val Val Asp Val Leu Lys Arg  
 180 185 190  
 Asn Lys Asn Phe Lys Ala Ile Glu Lys Ile Asn Ser His Leu Glu Lys  
 195 200 205  
 Leu

<210> 1343  
 <211> 270  
 <212> DNA  
 <213> Homo sapiens

<400> 1343  
 ccggaatgt gccgagttct cctgacgcac gaagtgatgt gtagtcgatg ctgcgaaaag  
 60  
 aaaagctgtg gaaaccgaaa tgagactcca tcggaccag tcataattga cagattcttt  
 120  
 ttaaaatttt tcctcaagtg caatcagaat tgtttgaaaa cagcaggaaa cccaagggac  
 180  
 atgagacggt ttcaggttgt gttgtcaaca acggtgaatg tggatggaca cgctctggct  
 240  
 gtttctgaca acatgtttgt tcataacaac  
 270

<210> 1344  
 <211> 90  
 <212> PRT  
 <213> Homo sapiens

<400> 1344  
 Pro Glu Met Cys Arg Val Leu Leu Thr His Glu Val Met Cys Ser Arg  
 1 5 10 15  
 Cys Cys Glu Lys Ser Cys Gly Asn Arg Asn Glu Thr Pro Ser Asp  
 20 25 30  
 Pro Val Ile Ile Asp Arg Phe Phe Leu Lys Phe Phe Leu Lys Cys Asn  
 35 40 45  
 Gln Asn Cys Leu Lys Thr Ala Gly Asn Pro Arg Asp Met Arg Arg Phe  
 50 55 60  
 Gln Val Val Leu Ser Thr Thr Val Asn Val Asp Gly His Val Leu Ala  
 65 70 75 80  
 Val Ser Asp Asn Met Phe Val His Asn Asn  
 85 90

<210> 1345  
 <211> 402  
 <212> DNA  
 <213> Homo sapiens

<400> 1345  
 acgcgtttga aacccaccga tgacttgctg gtgatcctgg gtacccgcgt cagcaacttc  
 60  
 agcggcaccg acaacaccga cttctacgac ccgaccaagg ccgacaaccg tctcacctac  
 120  
 cgccagacgg gcgtcgtcac gccctatgcc ggcacgtct acgacctgaa tgacatctgg  
 180  
 tcggtgtaca ccagctacac caagatctac aagccgcaga acagcaagga cgccgaccgc  
 240  
 aagttgctcg atccgattga aggtgacacc tacgaagccg ggctcaaggc agcgtttttc  
 300  
 gacggccgcc tgaacgccag ttttgccgca ttccgcatcg aacaggacaa cgctcgacag  
 360

tacgtttccg ggtttgagac cgactcgtgt atcgccatt gc  
402

<210> 1346

<211> 134

<212> PRT

<213> Homo sapiens

<400> 1346

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Arg | Leu | Lys | Pro | Thr | Asp | Asp | Leu | Ser | Val | Ile | Leu | Gly | Thr | Arg |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Val | Ser | Asn | Phe | Ser | Gly | Thr | Asp | Asn | Thr | Asp | Phe | Tyr | Asp | Pro | Thr |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Lys | Ala | Asp | Asn | Arg | Leu | Thr | Tyr | Arg | Gln | Thr | Gly | Val | Val | Thr | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Tyr | Ala | Gly | Ile | Val | Tyr | Asp | Leu | Asn | Asp | Ile | Trp | Ser | Val | Tyr | Thr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Ser | Tyr | Thr | Lys | Ile | Tyr | Lys | Pro | Gln | Asn | Ser | Lys | Asp | Ala | Asp | Arg |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Lys | Leu | Leu | Asp | Pro | Ile | Glu | Gly | Asp | Thr | Tyr | Glu | Ala | Gly | Leu | Lys |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ala | Ala | Phe | Phe | Asp | Gly | Arg | Leu | Asn | Ala | Ser | Phe | Ala | Ala | Phe | Arg |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Ile | Glu | Gln | Asp | Asn | Val | Ala | Gln | Tyr | Val | Ser | Gly | Phe | Glu | Thr | Asp |
|     | 115 |     |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Ser | Cys | Ile | Ala | His | Cys |     |     |     |     |     |     |     |     |     |     |
|     | 130 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

<210> 1347

<211> 415

<212> DNA

<213> Homo sapiens

<400> 1347

naccaccttc tgggcaggct ctcattcttt cattccaaga agcatttatt aaagactggc  
60  
tagggcgagg gaaccagct aggggctggg gataaaaaat aagaaataac tgaaggacct  
120  
tgctcttaag gaactccatc ttactgggtg gagccaaacg agaaaagaga gctcgggagg  
180  
gcaccaaagc ggtcttgccg aaattgcctg aggcagggga aggggcacgc tttctgaaaa  
240  
accccccaa accgattcca ggaagcccaa agggcgggcc ctctgcccgc agcactgcct  
300  
tcacgtttac ttccatcccg gcctcctcct tcccctaagg cttggcatgc aacatccctg  
360  
cttctcacc cctttttatt taagactcct attatctgca cacaatggaa gtttag  
415

<210> 1348

<211> 105

<212> PRT

<213> Homo sapiens

&lt;400&gt; 1348

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Met Glu Val Asn Val Lys Ala Val Leu Arg Ala Glu Gly Pro Pro Phe
 1           5           10           15
Gly Leu Pro Gly Ile Gly Leu Gly Gly Phe Phe Arg Lys Arg Ala Pro
 20           25           30
Ser Pro Ala Ser Gly Asn Phe Gly Lys Thr Ala Leu Val Pro Ser Arg
 35           40           45
Ala Leu Phe Ser Arg Leu Ala Pro Pro Ser Lys Met Glu Phe Leu Lys
 50           55           60
Ser Lys Val Leu Gln Leu Phe Leu Ile Phe Tyr Pro Gln Pro Leu Ala
 65           70           75           80
Gly Phe Pro Arg Pro Ser Gln Ser Leu Ile Asn Ala Ser Trp Asn Glu
 85           90           95
Arg Met Arg Ala Cys Pro Glu Gly Gly
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&lt;210&gt; 1349

&lt;211&gt; 924

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1349

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 <211> 209  
 <212> PRT  
 <213> Homo sapiens

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           20                  25                  30  
 Gly Leu Pro Val Ile Val Lys Pro Ala Arg Gly Gly Ser Ser Leu Gly  
           35                  40                  45  
 Val Thr Lys Val Asp Gly Val Asp Asp Leu Pro Gln Ala Val Ala Asn  
   50                  55                  60  
 Ala Tyr Ala Tyr Asp Asp Met Val Val Val Glu Glu Phe Ile Val Gly  
  65                  70                  75                  80  
 Asn Glu Leu Ala Ile Gly Met Ile Thr Thr Ser Glu Gly Thr Arg Val  
           85                  90                  95  
 Leu Pro Ala Val Glu Ile Arg Pro Val Gly Gly Val Tyr Asp Tyr Ser  
          100                 105                 110  
 Ala Met Tyr Thr Gly Gly Glu Thr Arg Leu Thr Ala Pro Ala Asp Ile  
          115                 120                 125  
 Ser Asp Thr Ala Ala Gln Thr Ala Thr Ala Met Ala Arg Val Val Gln  
          130                 135                 140  
 Lys Glu Leu Asp Phe Ser Gly Ile Ser Arg Val Asp Ala Ile Val Asp  
 145                 150                 155                 160  
 Glu Ser Gly Arg Pro Val Phe Leu Glu Ala Gly Ala Ala Pro Gly Met  
          165                 170                 175  
 Thr Ala Thr Ser Leu Val Pro Val Ala Met Lys Ala Ala Gly Leu Asp  
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<210> 1351  
 <211> 398  
 <212> DNA  
 <213> Homo sapiens

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 300  
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<210> 1352  
<211> 70  
<212> PRT  
<213> Homo sapiens

<400> 1352  
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Leu His Pro Gly Leu Leu Ile Val Asp His Ile His Phe Gln Tyr Asn  
35 40 45  
Gly Phe Leu Ile Arg Gly Pro Leu Tyr Arg Leu Gly Ala Arg Thr Asp  
50 55 60  
Ala Ser Ala Leu Phe Leu  
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<210> 1353  
<211> 480  
<212> DNA  
<213> Homo sapiens

<400> 1353  
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180  
tcatccatct gcgactacac caccttccag atcgagggtca ccaaacatta tcggaagcag  
240  
gagttccgag atgatatcaa gcgtctgtat cgccaggctg ggggtggagct caagaccacg  
300  
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360  
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<210> 1354  
<211> 160  
<212> PRT  
<213> Homo sapiens

<400> 1354  
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Val Arg Gly Ile Gly Gln Pro Arg Gly Asn Met Leu Leu Val Gly Ile



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960

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<210> 1356  
 <211> 244  
 <212> PRT  
 <213> Homo sapiens

<400> 1356  
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 35 40 45  
 Thr Ala Asn Ser Ala Asn Glu Cys Gln Ser Cys Asn Cys Tyr Gly His  
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 Ala Thr Asp Cys Tyr Tyr Asp Pro Glu Val Asp Arg Arg Arg Ala Ser  
 65 70 75 80  
 Gln Ser Leu Asp Gly Thr Tyr Gln Gly Gly Gly Val Cys Ile Asp Cys  
 85 90 95  
 Gln His His Thr Ala Gly Val Asn Cys Glu Arg Cys Leu Pro Gly Phe  
 100 105 110  
 Tyr Arg Ser Pro Asn His Pro Leu Asp Ser Pro His Val Cys Arg Arg  
 115 120 125  
 Cys Asn Cys Glu Ser Asp Phe Thr Asp Gly Thr Cys Glu Asp Leu Thr  
 130 135 140  
 Gly Arg Cys Tyr Cys Arg Pro Asn Phe Ser Gly Glu Arg Cys Asp Val  
 145 150 155 160  
 Cys Ala Glu Gly Phe Thr Gly Phe Pro Ser Cys Tyr Pro Thr Pro Ser  
 165 170 175  
 Ser Ser Asn Asp Thr Arg Glu Gln Val Leu Pro Ala Gly Gln Ile Val  
 180 185 190  
 Asn Cys Asp Cys Ser Ala Ala Gly Thr Gln Gly Asn Ala Cys Arg Lys  
 195 200 205  
 Asp Pro Arg Val Gly Arg Cys Phe Ala Asn Pro Asn Phe Gln Gly Thr  
 210 215 220  
 His Cys Glu Leu Cys Ala Pro Gly Phe Tyr Gly Pro Gly Cys Pro Gly  
 225 230 235 240  
 Ser Leu His Ala

<210> 1357  
 <211> 663  
 <212> DNA  
 <213> Homo sapiens

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 300  
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<210> 1358

<211> 221

<212> PRT

<213> Homo sapiens

<400> 1358

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Pro | Pro | Pro | Pro | Gly | Gly | Gly | Gly | Gly | Gly | Asn | Asn | Thr | Arg | Lys |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Val | Asp | Arg | Tyr | Pro | Ser | Trp | Ser | Ser | Trp | Ser | Ile | Tyr | Gly | Pro | Arg |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Cys | Gly | Phe | Gly | Thr | Glu | Val | Glu | Phe | Asn | Thr | Pro | Val | Leu | Pro | Val |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Gly | Gly | Val | Arg | Pro | Val | Ile | Leu | Gln | Arg | Pro | Gly | Trp | Cys | Pro | Gly |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Val | Phe | Val | Gly | Leu | Pro | Asn | His | His | Leu | Asp | Gly | Val | Ala | Met | Trp |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Cys | Glu | Leu | Leu | Ala | Ala | Val | Phe | Cys | Ala | Arg | Ala | Cys | Leu | Ala | Trp |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Leu | Gln | Glu | Ser | Leu | Ala | His | Arg | Ala | Ser | Ala | Ser | Val | Lys | Ser | Gln |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Leu | Arg | Arg | Asp | Ile | Leu | Gln | Ala | Arg | Leu | Ser | Arg | Pro | Thr | Asp | Ala |
|     | 115 |     |     |     |     | 120 |     |     |     |     |     | 125 |     |     |     |
| Thr | Met | Pro | Ser | Arg | Thr | Leu | Ile | Ser | Leu | Met | Thr | Thr | Gly | Leu | Asp |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Ala | Leu | Asp | Gly | Tyr | Tyr | Ser | Lys | Tyr | Leu | Pro | Gln | Leu | Val | Leu | Ala |
| 145 |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     | 160 |     |
| Val | Ile | Val | Pro | Ala | Val | Leu | Ala | Thr | Ala | Ile | Gly | Leu | Asn | Asp | Leu |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Thr | Ser | Leu | Val | Ile | Val | Val | Val | Thr | Ile | Pro | Leu | Ile | Pro | Val | Phe |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Met | Ala | Leu | Ile | Gly | Trp | Arg | Thr | Glu | Ala | Ala | Val | Ala | Lys | Arg | Phe |
|     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |     |
| Lys | Val | Ala | Thr | Arg | Leu | Ala | Asn | His | Phe | Ala | Asp | Leu |     |     |     |

210

215

220

&lt;210&gt; 1359

&lt;211&gt; 423

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1359

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 300  
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 420  
 ctt  
 423

&lt;210&gt; 1360

&lt;211&gt; 104

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1360

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Leu | Asp | Asp | Ile | Pro | Gly | Leu | Thr | Leu | Ser | Leu | Val | Asp | Ala | Ser |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Glu | Ser | Ala | Asp | Leu | Arg | Phe | Thr | Cys | Asp | Ser | Tyr | Thr | Lys | Glu | Asp |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Asp | Val | Phe | Tyr | Pro | Leu | Trp | Glu | Asp | Asp | Tyr | Val | Val | Ala | Met | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Val | Gly | Tyr | Trp | Leu | Ala | Asp | Tyr | Thr | Ser | Leu | Ser | Ile | Lys | Gln | Ile |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Asp | Lys | Gln | Pro | Phe | Val | Ser | Arg | Thr | Pro | Cys | Asp | Ile | Leu | Glu | Ser |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Trp | Asn | Phe | Ile | Met | Gln | Lys | Gln | Gly | Leu | Ser | Thr | Asp | Val | Arg | Ala |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Gln | Val | Lys | Thr | Glu | Glu | Tyr | Ala |     |     |     |     |     |     |     |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 100 |

&lt;210&gt; 1361

&lt;211&gt; 5300

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1361

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3180  
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3240  
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<210> 1362  
 <211> 1587  
 <212> PRT  
 <213> Homo sapiens

<400> 1362  
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 35 40 45  
 Gln Ala Ser His Thr Cys Gly Ser Pro Pro Glu Asp Phe Cys Pro His  
 50 55 60  
 Val Gly Ala Ala Gly Ala Gly Ala His Cys Gln Arg Cys Asp Ala Ala  
 65 70 75 80  
 Asp Pro Gln Arg His His Asn Ala Ser Tyr Leu Thr Asp Phe His Ser  
 85 90 95  
 Gln Asp Glu Ser Thr Trp Trp Gln Ser Pro Ser Met Ala Phe Gly Val  
 100 105 110  
 Gln Tyr Pro Thr Ser Val Asn Ile Thr Leu Arg Leu Gly Lys Ala Tyr  
 115 120 125  
 Glu Ile Thr Tyr Val Arg Leu Lys Phe His Thr Ser Arg Pro Glu Ser  
 130 135 140  
 Phe Ala Ile Tyr Lys Arg Ser Arg Ala Asp Gly Pro Trp Glu Pro Tyr  
 145 150 155 160  
 Gln Phe Tyr Ser Ala Ser Cys Gln Lys Thr Tyr Gly Arg Pro Glu Gly  
 165 170 175  
 Gln Tyr Leu Arg Pro Gly Glu Asp Glu Arg Val Ala Phe Cys Thr Ser  
 180 185 190  
 Glu Phe Ser Asp Ile Ser Pro Leu Ser Gly Gly Asn Val Ala Phe Ser  
 195 200 205  
 Thr Leu Glu Gly Arg Pro Ser Ala Tyr Asn Phe Glu Glu Ser Pro Gly  
 210 215 220  
 Leu Gln Glu Trp Val Thr Ser Thr Glu Leu Leu Ile Ser Leu Asp Arg  
 225 230 235 240  
 Leu Asn Thr Phe Gly Asp Asp Ile Phe Lys Asp Pro Lys Val Leu Gln  
 245 250 255  
 Ser Tyr Tyr Tyr Ala Val Ser Asp Phe Ser Val Gly Gly Arg Cys Lys



1162

|   |      |      |
|---|------|------|
| 690   | 695  | 700  |
| Val Pro Cys Thr Cys Asn Gln His Gly Thr Cys Asp Pro Asn Thr Gly |      |      |
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| Ile Cys Val Cys Ser His His Thr Glu Gly Pro Ser Cys Glu Arg Cys |      |      |
|   | 725  | 730  |
| Leu Pro Gly Phe Tyr Gly Asn Pro Phe Ala Gly Gln Ala Asp Asp Cys |      |      |
|   | 740  | 745  |
| Gln Pro Cys Pro Cys Pro Gly Gln Ser Ala Cys Thr Thr Ile Pro Glu |      |      |
|   | 755  | 760  |
| Ser Gly Glu Val Val Cys Thr His Cys Pro Pro Gly Gln Arg Gly Arg |      |      |
|   | 770  | 775  |
| Arg Cys Glu Val Cys Asp Asp Gly Phe Phe Gly Asp Pro Leu Gly Leu |      |      |
| 785   | 790  | 795  |
| Phe Gly His Pro Gln Pro Cys His Gln Cys Gln Cys Ser Gly Asn Val |      |      |
|   | 805  | 810  |
| Asp Pro Asn Ala Val Gly Asn Cys Asp Pro Leu Ser Gly His Cys Leu |      |      |
|   | 820  | 825  |
| Arg Cys Leu His Asn Thr Thr Gly Asp His Cys Glu His Cys Gln Glu |      |      |
|   | 835  | 840  |
| Gly Phe Tyr Gly Ser Ala Leu Ala Pro Arg Pro Ala Asp Lys Cys Met |      |      |
|   | 850  | 855  |
| Pro Cys Ser Cys His Pro Gln Gly Ser Val Ser Glu Gln Met Pro Cys |      |      |
| 865   | 870  | 875  |
| Asp Pro Val Thr Gly Gln Cys Ser Cys Leu Pro His Val Thr Ala Arg |      |      |
|   | 885  | 890  |
| Asp Cys Ser Arg Cys Tyr Pro Gly Phe Phe Asp Leu Gln Pro Gly Arg |      |      |
|   | 900  | 905  |
| Gly Cys Arg Ser Cys Lys Cys His Pro Leu Gly Ser Gln Glu Asp Gln |      |      |
|   | 915  | 920  |
| Cys His Pro Lys Thr Gly Gln Cys Thr Cys Arg Pro Gly Val Thr Gly |      |      |
|   | 930  | 935  |
| Gln Ala Cys Asp Arg Cys Gln Leu Gly Phe Phe Gly Ser Ser Ile Lys |      |      |
| 945   | 950  | 955  |
| Gly Cys Arg Ala Cys Arg Cys Ser Pro Leu Gly Ala Ala Ser Ala Gln |      |      |
|   | 965  | 970  |
| Cys His Tyr Asn Gly Thr Cys Val Cys Arg Pro Gly Phe Glu Gly Tyr |      |      |
|   | 980  | 985  |
| Lys Cys Asp Arg Cys His Tyr Asn Phe Phe Leu Thr Ala Asp Gly Thr |      |      |
|   | 995  | 1000 |
| His Cys Gln Gln Cys Pro Ser Cys Tyr Ala Leu Val Lys Glu Glu Thr |      |      |
|   | 1010 | 1015 |
| Ala Lys Leu Lys Ala Arg Leu Thr Leu Thr Glu Gly Trp Leu Gln Gly |      |      |
| 1025  | 1030 | 1035 |
| Ser Asp Cys Gly Ser Pro Trp Gly Pro Leu Asp Ile Leu Leu Gly Glu |      |      |
|   | 1045 | 1050 |
| Ala Pro Arg Gly Asp Val Tyr Gln Gly His His Leu Leu Pro Gly Ala |      |      |
|   | 1060 | 1065 |
| Arg Glu Ala Phe Leu Glu Gln Met Met Gly Leu Glu Gly Ala Val Lys |      |      |
|   | 1075 | 1080 |
| Ala Ala Arg Glu Gln Leu Gln Arg Leu Asn Lys Gly Ala Arg Cys Ala |      |      |
|   | 1090 | 1095 |
| Gln Ala Gly Ser Gln Lys Thr Cys Thr Gln Leu Ala Asp Leu Glu Ala |      |      |
| 1105  | 1110 | 1115 |
| Val Leu Glu Ser Ser Glu Glu Glu Ile Leu His Ala Ala Ala Ile Leu |      |      |

|   |      |      |
|---|------|------|
| 1125  | 1130 | 1135 |
| Ala Ser Leu Glu Ile Pro Gln Glu Gly Pro Ser Gln Pro Thr Lys Trp |      |      |
| 1140  | 1145 | 1150 |
| Ser His Leu Ala Ile Glu Ala Arg Ala Leu Ala Arg Ser His Arg Asp |      |      |
| 1155  | 1160 | 1165 |
| Thr Ala Thr Lys Ile Ala Ala Thr Ala Trp Arg Ala Leu Leu Ala Ser |      |      |
| 1170  | 1175 | 1180 |
| Asn Thr Ser Tyr Ala Leu Leu Trp Asn Leu Leu Glu Gly Arg Val Ala |      |      |
| 1185  | 1190 | 1195 |
| Leu Glu Thr Gln Arg Asp Leu Glu Asp Arg Tyr Gln Glu Val Gln Ala |      | 1200 |
| 1205  | 1210 | 1215 |
| Ala Gln Lys Ala Leu Arg Thr Ala Val Ala Glu Val Leu Pro Glu Ala |      |      |
| 1220  | 1225 | 1230 |
| Glu Ser Val Leu Ala Thr Val Arg Gln Val Gly Ala Asp Thr Ala Pro |      |      |
| 1235  | 1240 | 1245 |
| Tyr Leu Ala Leu Leu Ala Ser Pro Gly Ala Leu Pro Gln Lys Ser Arg |      |      |
| 1250  | 1255 | 1260 |
| Ala Glu Asp Leu Gly Leu Lys Ala Lys Ala Leu Glu Lys Thr Val Ala |      |      |
| 1265  | 1270 | 1275 |
| Ser Trp Gln His Met Ala Thr Glu Ala Ala Arg Thr Leu Gln Thr Ala |      | 1280 |
| 1285  | 1290 | 1295 |
| Ala Gln Ala Thr Leu Arg Gln Thr Glu Pro Leu Thr Met Ala Arg Ser |      |      |
| 1300  | 1305 | 1310 |
| Arg Leu Thr Ala Thr Phe Ala Ser Gln Leu His Gln Glu Ala Arg Ala |      |      |
| 1315  | 1320 | 1325 |
| Ala Leu Thr Gln Ala Ser Ser Ser Val Gln Ala Ala Thr Val Thr Val |      |      |
| 1330  | 1335 | 1340 |
| Met Gly Ala Arg Thr Leu Leu Ala Asp Leu Glu Gly Met Lys Leu Gln |      |      |
| 1345  | 1350 | 1355 |
| Phe Pro Arg Pro Lys Asp Gln Ala Ala Leu Gln Arg Lys Ala Asp Ser |      | 1360 |
| 1365  | 1370 | 1375 |
| Val Ser Asp Arg Leu Leu Ala Asp Thr Arg Lys Lys Thr Lys Gln Ala |      |      |
| 1380  | 1385 | 1390 |
| Glu Arg Met Leu Gly Asn Ala Ala Pro Leu Ser Ser Ser Ala Lys Lys |      |      |
| 1395  | 1400 | 1405 |
| Lys Gly Arg Glu Ala Glu Val Leu Ala Lys Asp Ser Ala Lys Leu Ala |      |      |
| 1410  | 1415 | 1420 |
| Lys Ala Leu Leu Arg Glu Arg Lys Gln Ala His Arg Arg Ala Ser Arg |      |      |
| 1425  | 1430 | 1435 |
| Leu Thr Ser Gln Thr Gln Ala Thr Leu Gln Gln Ala Ser Gln Gln Val |      | 1440 |
| 1445  | 1450 | 1455 |
| Leu Ala Ser Glu Ala Arg Arg Gln Glu Leu Glu Glu Ala Glu Arg Val |      |      |
| 1460  | 1465 | 1470 |
| Gly Ala Gly Leu Ser Glu Met Glu Gln Gln Ile Arg Glu Ser Arg Ile |      |      |
| 1475  | 1480 | 1485 |
| Ser Leu Glu Lys Asp Ile Glu Thr Leu Ser Glu Leu Leu Ala Arg Leu |      |      |
| 1490  | 1495 | 1500 |
| Gly Ser Leu Asp Thr His Gln Ala Pro Ala Gln Ala Leu Asn Glu Thr |      |      |
| 1505  | 1510 | 1515 |
| Gln Trp Ala Leu Glu Arg Leu Arg Leu Gln Leu Gly Ser Pro Gly Ser |      |      |
| 1525  | 1530 | 1535 |
| Leu Gln Arg Lys Leu Ser Leu Leu Glu Gln Glu Ser Gln Gln Gln Glu |      |      |
| 1540  | 1545 | 1550 |
| Leu Gln Ile Gln Gly Phe Glu Ser Asp Leu Ala Glu Ile Arg Ala Asp |      |      |

1555                      1560                      1565  
 Lys Gln Asn Leu Glu Ala Ile Leu His Ser Leu Pro Glu Asn Cys Ala  
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 Ser Trp Gln  
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<210> 1363  
 <211> 392  
 <212> DNA  
 <213> Homo sapiens

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 ggaatctgcg aaaccgacaa agatgctggct gtttgagtgg atgtgaagga agatgcaggt  
 180  
 gtctcatcgg cggggccacc atgaacaacc cttcttgatg ccccgtaggt gacgcgctca  
 240  
 cacacgacat gcacaacaaa taaatcgcaa agcacagagg gacaatcgaa tacaccttga  
 300  
 cccatgcact tgcgtgcctg gaggcattggc taccaggcaa tcccttcatt tccagaatga  
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 392

<210> 1364  
 <211> 104  
 <212> PRT  
 <213> Homo sapiens

<400> 1364  
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 Val Lys Val Tyr Ser Ile Val Pro Leu Cys Phe Ala Ile Tyr Leu Leu  
 20                      25                      30  
 Cys Met Ser Cys Val Ser Ala Ser Pro Thr Gly His Gln Glu Gly Leu  
 35                      40                      45  
 Phe Met Val Ala Pro Pro Met Arg His Leu His Leu Pro Ser His Pro  
 50                      55                      60  
 Leu Lys Gln Pro His Leu Cys Arg Phe Arg Arg Phe Leu Leu Arg Leu  
 65                      70                      75                      80  
 Arg Ala Gln Arg Gly Phe Pro Leu Arg Pro Cys Leu Arg Trp Arg Leu  
 85                      90                      95  
 Arg Leu Gln Trp Arg Leu Tyr Pro  
 100

<210> 1365  
 <211> 451  
 <212> DNA  
 <213> Homo sapiens

<400> 1365

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 tggcccaatg tcttcatagc tgagaagagt gtggctgtga acaaggggag gctgaagagg  
 180  
 ctgggaatca cccacattct gaatgctgcg catggcaccg gcgtttacac tggccccgaa  
 240  
 ttctacactg gcctggagat ccagtacctg ggtgtagagg tggatgactt tcctgaggtg  
 300  
 gacatttccc agcatttccg gaaggcgtct gagttcctgg atgaggcgct gctgacttac  
 360  
 agagggaaaag tcctggtcag cagcgaaatg ggcacagcc ggtcagcagt gctggtggtc  
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 gcctacctga tgatcttcca caacatggcc a  
 451

<210> 1366  
 <211> 150  
 <212> PRT  
 <213> Homo sapiens

<400> 1366  
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 Cys Val Leu Asp Leu Gln Arg Ala Leu Val Gln Asp Arg Gln Glu Ala  
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 Pro Trp Asn Glu Val Asp Glu Val Trp Pro Asn Val Phe Ile Ala Glu  
 35 40 45  
 Lys Ser Val Ala Val Asn Lys Gly Arg Leu Lys Arg Leu Gly Ile Thr  
 50 55 60  
 His Ile Leu Asn Ala Ala His Gly Thr Gly Val Tyr Thr Gly Pro Glu  
 65 70 75 80  
 Phe Tyr Thr Gly Leu Glu Ile Gln Tyr Leu Gly Val Glu Val Asp Asp  
 85 90 95  
 Phe Pro Glu Val Asp Ile Ser Gln His Phe Arg Lys Ala Ser Glu Phe  
 100 105 110  
 Leu Asp Glu Ala Leu Leu Thr Tyr Arg Gly Lys Val Leu Val Ser Ser  
 115 120 125  
 Glu Met Gly Ile Ser Arg Ser Ala Val Leu Val Val Ala Tyr Leu Met  
 130 135 140  
 Ile Phe His Asn Met Ala  
 145 150

<210> 1367  
 <211> 330  
 <212> DNA  
 <213> Homo sapiens

<400> 1367  
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 120

tctgtctgcg attgctgctg gtcacgtctg cactgcccgt cagcgcactc gtcggccaga  
 180  
 gcttcttcga ccgcaaggc gccttcgtcg gcctcgccaa cttegtctgc tacctcgaca  
 240  
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 tctgcaccgc catcgcttac gtctacgct  
 330

<210> 1368  
 <211> 82  
 <212> PRT  
 <213> Homo sapiens

<400> 1368  
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 1 5 10 15  
 Cys Cys Trp Ser Ser Ser His Cys Pro Ser Ala His Ser Ser Ala Arg  
 20 25 30  
 Ala Ser Ser Thr Ala Lys Ala Pro Ser Ser Ala Ser Pro Thr Ser Leu  
 35 40 45  
 Ala Thr Ser Thr Thr Pro Pro Trp Ser Ser Pro Pro Ser Thr Ala Ser  
 50 55 60  
 Gly Trp Pro Arg Ser Ala Pro Ser Ser Ala Pro Pro Ser Pro Thr Ser  
 65 70 75 80  
 Thr Arg

<210> 1369  
 <211> 356  
 <212> DNA  
 <213> Homo sapiens

<400> 1369  
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 120  
 cccctggacc cctacagcca ggagcagcgg gagcagctgc aggtcctacg ccaggctgcc  
 180  
 ttcgaggtgg agggggagtc ctcggtgcc gggctaagtg ctgaccgtcg ccgttcctc  
 240  
 tgtgcccag agttccgcaa actgggcttt tctaacagca acccagcaca ggacctggag  
 300  
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 356

<210> 1370  
 <211> 104  
 <212> PRT  
 <213> Homo sapiens

<400> 1370  
 Met Gly Asp Glu Met Ala His His Leu Tyr Val Leu Gln Ala Leu Met

```

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Leu Gly Leu Leu Glu Pro Arg Met Arg Thr Pro Leu Asp Pro Tyr Ser
      20             25             30
Gln Glu Gln Arg Glu Gln Leu Gln Val Leu Arg Gln Ala Ala Phe Glu
      35             40             45
Val Glu Gly Glu Ser Ser Gly Ala Gly Leu Ser Ala Asp Arg Arg Arg
      50             55             60
Ser Leu Cys Ala Arg Glu Phe Arg Lys Leu Gly Phe Ser Asn Ser Asn
65             70             75             80
Pro Ala Gln Asp Leu Glu Arg Val Pro Pro Gly Leu Leu Ala Leu Asp
      85             90             95
Asn Met Leu Tyr Phe Ser Arg Asn
      100

```

&lt;210&gt; 1371

&lt;211&gt; 648

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1371

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tggttcagcgg ttggattagc cagttctgca gactggctca caccagacc atctggaccg
120
cttatagaga agacatgttc caagtaccct ctttcctttg tctgcttttc tcatgggtac
180
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240
ttgagagagc agtcagatta acccaacaac tcttggagtg ccttggtcac ctgagagcat
300
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360
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420
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480
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540
tatacctgga aatattcgga acattctatt agcagaaatg caatgtagga agcttattgg
600
ttctagaaga atgtgtcatt gtcagtaatt ggaattactg acagatct
648

```

&lt;210&gt; 1372

&lt;211&gt; 101

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1372

```

Met Phe Gln Val Pro Ser Phe Leu Cys Leu Leu Phe Ser Trp Val Leu
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Cys Pro Leu Arg Ser Leu Leu Ser Ser Phe Pro Leu Leu Leu Ser Leu
      20             25             30
Phe Leu Phe Val Glu Arg Ala Val Arg Leu Thr Gln Gln Leu Leu Glu

```

```

          35          40          45
Cys Leu Gly His Leu Arg Ala Trp Lys Val His Ala Leu Thr Arg Val
          50          55          60
Met Thr Thr Ile Ser Pro Lys Leu Ser Ser Cys His Pro Ile Gly Ser
65          70          75          80
Ile Asp Gln Lys Gly Lys Ser Ser Val Leu Lys Leu Ile Asn Gln Leu
          85          90          95
Lys Leu Tyr Leu Gln
          100

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<210> 1373  
 <211> 369  
 <212> DNA  
 <213> Homo sapiens

```

<400> 1373
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120
acatgggttt catgggtcga catgggttcc gtgtcctgct tgccgggcct gagctgtttg
180
tcaggtgtac aaccgagaac cttgcagacc agaatccaag actccgcagc atgtgtgtgc
240
cgggggcgga cagagctgt tggaggagaa agccatcagt gtatttagag gcaaagggct
300
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360
ctctccgca
369

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<210> 1374  
 <211> 98  
 <212> PRT  
 <213> Homo sapiens

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<400> 1374
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Met Gly Phe Met Gly Arg His Gly Phe Arg Val Leu Leu Ala Gly Pro
          20          25          30
Glu Leu Phe Val Arg Cys Thr Thr Glu Asn Leu Ala Asp Gln Asn Pro
          35          40          45
Arg Leu Arg Ser Met Cys Val Pro Gly Arg Asp Thr Ser Cys Trp Arg
          50          55          60
Arg Lys Pro Ser Val Tyr Leu Glu Ala Lys Gly Phe Leu Asn Arg Gly
65          70          75          80
Cys Ala Gly Leu Leu Lys Val Leu Thr Gln Ala Ser Glu Val Asn Pro
          85          90          95
Leu Arg

```

<210> 1375  
 <211> 282



&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1375

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 60  
 ggctggcact ggcccgcctt caacatcgct gacatggcca tcgtgggcgg ggcgatcgcg  
 120  
 ctggtggccc agtcgttcat gagcgtggag aaccgcggcg ccacaaagga gtcccagtga  
 180  
 cattgggacg atccggaaat tcgcaatgca cacggtgcag gacaccaatc tgaagagaac  
 240  
 ggcccccagc atgagcggcc gcggcttggc cctcatgcta gc  
 282

&lt;210&gt; 1376

&lt;211&gt; 59

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1376

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Ala | Phe | Asp | Arg | Ala | Thr | Arg | Gly | His | Val | Ile | Asp | Tyr | Ile | Asp |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Phe | His | Leu | His | Gly | Trp | His | Trp | Pro | Ala | Phe | Asn | Ile | Ala | Asp | Met |
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&lt;210&gt; 1377

&lt;211&gt; 6306

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1377

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&lt;210&gt; 1378

&lt;211&gt; 798

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1378

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| Met | Ala | Trp | Asp | Met | Cys | Asn | Gln | Asp | Ser | Glu | Ser | Val | Trp | Ser | Asp |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Ile | Glu | Cys | Ala | Ala | Leu | Val | Gly | Glu | Asp | Gln | Pro | Leu | Cys | Pro | Asp |
|     |     |     | 20  |     |     |     | 25  |     |     |     |     |     | 30  |     |     |
| Leu | Pro | Glu | Leu | Asp | Leu | Ser | Glu | Leu | Asp | Val | Asn | Asp | Leu | Asp | Thr |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Asp | Ser | Phe | Leu | Gly | Gly | Leu | Lys | Trp | Cys | Ser | Asp | Gln | Ser | Glu | Ile |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Ile | Ser | Asn | Gln | Tyr | Asn | Asn | Glu | Pro | Ser | Asn | Ile | Phe | Glu | Lys | Ile |
| 65  |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     | 80  |     |
| Asp | Glu | Glu | Asn | Glu | Ala | Asn | Leu | Leu | Ala | Val | Leu | Thr | Glu | Thr | Leu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Asp | Ser | Leu | Pro | Val | Asp | Glu | Asp | Gly | Leu | Pro | Ser | Phe | Asp | Ala | Leu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Thr | Asp | Gly | Asp | Val | Thr | Thr | Asp | Asn | Glu | Ala | Ser | Pro | Ser | Ser | Met |

|   |     |     |
|---|-----|-----|
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| 165   | 170 | 175 |
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| Glu Leu Leu Lys Tyr Leu Thr Thr Asn Asp Asp Pro Pro His Thr Lys |     |     |
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| Thr Leu Ser Leu Pro Leu Thr Pro Glu Ser Pro Asn Asp Pro Lys Gly |     |     |
| 260   | 265 | 270 |
| Ser Pro Phe Glu Asn Lys Thr Ile Glu Arg Thr Leu Ser Val Glu Leu |     |     |
| 275   | 280 | 285 |
| Ser Gly Thr Ala Gly Leu Thr Pro Pro Thr Thr Pro Pro His Lys Ala |     |     |
| 290   | 295 | 300 |
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| Lys Thr Val Val Pro Pro Ser Lys Lys Pro Arg Tyr Ser Glu Ser     |     |     |
| 325   | 330 | 335 |
| Ser Gly Thr Gln Gly Asn Asn Ser Thr Lys Lys Gly Pro Glu Gln Ser |     |     |
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| Glu Leu Tyr Ala Gln Leu Ser Lys Ser Ser Val Leu Thr Gly Gly His |     |     |
| 355   | 360 | 365 |
| Glu Glu Arg Lys Thr Lys Arg Pro Ser Leu Arg Leu Phe Gly Asp His |     |     |
| 370   | 375 | 380 |
| Asp Tyr Cys Gln Ser Ile Asn Ser Lys Thr Glu Ile Leu Ile Asn Ile |     |     |
| 385   | 390 | 395 |
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| 405   | 410 | 415 |
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| 420   | 425 | 430 |
| Tyr Leu Arg Glu Thr Leu Glu Ala Ser Lys Gln Val Ser Pro Cys Ser |     |     |
| 435   | 440 | 445 |
| Thr Arg Lys Gln Leu Gln Asp Gln Glu Ile Arg Ala Glu Leu Asn Lys |     |     |
| 450   | 455 | 460 |
| His Phe Gly His Pro Ser Gln Ala Val Phe Asp Asp Glu Ala Asp Lys |     |     |
| 465   | 470 | 475 |
| Thr Gly Glu Leu Arg Asp Ser Asp Phe Ser Asn Glu Gln Phe Ser Lys |     |     |
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| Leu Pro Met Phe Ile Asn Ser Gly Leu Ala Met Asp Gly Leu Phe Asp |     |     |
| 500   | 505 | 510 |
| Asp Ser Glu Asp Glu Ser Asp Lys Leu Ser Tyr Pro Trp Asp Gly Thr |     |     |
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| Gln Ser Tyr Ser Leu Phe Asn Val Ser Pro Ser Cys Ser Ser Phe Asn |     |     |
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<210> 1382



&lt;211&gt; 123

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1382

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          35           40           45
Gly Cys His Gln Arg Gly Gly Arg Ser His Arg Ser Ala Leu Val Ser
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Ala Gly Leu Lys Trp Gly Phe Ser Phe Cys Val Glu Gln Phe Ile Arg
65           70           75           80
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Leu Ala Pro Ala Lys Gly Leu Phe Gly Asp Leu
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&lt;210&gt; 1383

&lt;211&gt; 906

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1383

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 120  
 gtggcgtgta tgcacgtgtg tgcacgtgtg gcactgtgtg tggggtgtat gncatggtg  
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 210

<210> 1386  
 <211> 70  
 <212> PRT  
 <213> Homo sapiens

<400> 1386  
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 1 5 10 15  
 Val Val Cys Met Xaa Trp Cys Val His Val Cys Xaa Cys Val Cys Met  
 20 25 30  
 Val Met Cys Thr Cys Ala Leu Cys Val Ala Cys Met His Gly Val Cys

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          35          40          45
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          50          55          60
Thr Gly Gly Cys Val Cys
65          70

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<210> 1387  
 <211> 521  
 <212> DNA  
 <213> Homo sapiens

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<400> 1387
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120
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420
cgatgagatc gatgttgccc ttggagtggg aactcgggtc gaagggtgtac ccgatgaact
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521

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<210> 1388  
 <211> 103  
 <212> PRT  
 <213> Homo sapiens

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<400> 1388
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Lys Gly Gln Val Val Gln Ala Glu Gly Val Ser Gly Cys Gly Lys His
          20          25          30
Ser Pro Gly Gly Gln His Thr Glu Ala Gly Glu Asp Glu Gly Val Val
          35          40          45
Ala Ala Asp Gly Ser Ser Asp Ser Thr Ala Gly Asp Gly Gly Lys Glu
          50          55          60
Ser Glu Asp Glu Asp Ser Asp Arg Gly Gly Glu His Arg Cys Ser Phe
65          70          75          80
Val Arg Ala Gly Tyr Pro Ala Ile Cys His Pro His Ala Ala Thr Gly
          85          90          95
Ala Ala Phe Ser Gly His Pro
100

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<210> 1389  
 <211> 4013

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1389

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240  
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300  
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420  
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540  
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600  
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3120

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3900  
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4013

&lt;210&gt; 1390

&lt;211&gt; 1156

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1390

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Leu | Lys | Met | Glu | Thr | Ser | Gly | Met | Thr | Thr | Pro | Ser | Leu | Lys | Thr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Asp | Gly | Gly | Arg | Arg | Thr | Ala | Thr | Ser | Pro | Pro | Pro | Thr | Thr | Ser | Gln |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Thr | Ile | Ile | Ser | Thr | Ile | Pro | Ser | Thr | Ala | Met | His | Thr | Arg | Ser | Thr |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ala | Ala | Pro | Ile | Pro | Ile | Leu | Pro | Glu | Arg | Gly | Val | Ser | Leu | Phe | Pro |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Tyr | Gly | Ala | Asp | Ala | Gly | Asp | Leu | Glu | Phe | Val | Arg | Arg | Thr | Val | Asp |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Phe | Thr | Ser | Pro | Leu | Phe | Lys | Pro | Ala | Thr | Gly | Phe | Pro | Leu | Gly | Ser |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Ser | Leu | Arg | Asp | Ser | Leu | Tyr | Phe | Thr | Asp | Asn | Gly | Gln | Ile | Ile | Phe |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Pro | Glu | Ser | Asp | Tyr | Gln | Ile | Phe | Ser | Tyr | Pro | Asn | Pro | Leu | Pro | Thr |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Gly | Phe | Thr | Gly | Arg | Asp | Pro | Val | Ala | Leu | Val | Ala | Pro | Phe | Trp | Asp |

130 135 140  
 Asp Ala Asp Phe Ser Thr Gly Arg Gly Thr Thr Phe Tyr Gln Glu Tyr  
 145 150 155 160  
 Glu Thr Phe Tyr Gly Glu His Ser Leu Leu Val Gln Gln Ala Glu Ser  
 165 170 175  
 Trp Ile Arg Lys Ile Thr Asn Asn Gly Gly Tyr Lys Ala Arg Trp Ala  
 180 185 190  
 Leu Lys Val Thr Trp Val Asn Ala His Ala Tyr Pro Ala Gln Trp Thr  
 195 200 205  
 Leu Gly Ser Asn Thr Tyr Gln Ala Ile Leu Ser Thr Asp Gly Ser Arg  
 210 215 220  
 Ser Tyr Ala Leu Phe Leu Tyr Gln Ser Gly Gly Met Gln Trp Asp Val  
 225 230 235 240  
 Ala Gln Arg Ser Gly Asn Pro Val Leu Met Gly Phe Ser Ser Gly Asp  
 245 250 255  
 Gly Tyr Phe Glu Asn Ser Pro Leu Met Ser Gln Pro Val Trp Glu Arg  
 260 265 270  
 Tyr Arg Pro Asp Arg Phe Leu Asn Ser Asn Ser Gly Leu Gln Gly Leu  
 275 280 285  
 Gln Phe Tyr Arg Leu His Arg Glu Glu Arg Pro Asn Tyr Arg Leu Glu  
 290 295 300  
 Cys Leu Gln Trp Leu Lys Ser Gln Pro Arg Trp Pro Ser Trp Gly Trp  
 305 310 315 320  
 Asn Gln Val Ser Cys Pro Cys Ser Trp Gln Gln Gly Arg Arg Asp Leu  
 325 330 335  
 Arg Phe Gln Pro Val Ser Ile Gly Arg Trp Gly Leu Gly Ser Arg Gln  
 340 345 350  
 Leu Cys Ser Phe Thr Ser Trp Arg Gly Gly Val Cys Cys Ser Tyr Gly  
 355 360 365  
 Pro Trp Gly Glu Phe Arg Glu Gly Trp His Val Gln Arg Pro Trp Gln  
 370 375 380  
 Leu Ala Gln Glu Leu Glu Pro Gln Ser Trp Cys Cys Arg Trp Asn Asp  
 385 390 395 400  
 Lys Pro Tyr Leu Cys Ala Leu Tyr Gln Gln Arg Arg Pro His Val Gly  
 405 410 415  
 Cys Ala Thr Tyr Arg Pro Pro Gln Pro Ala Trp Met Phe Gly Asp Pro  
 420 425 430  
 His Ile Thr Thr Leu Asp Gly Val Ser Tyr Thr Phe Asn Gly Leu Gly  
 435 440 445  
 Asp Phe Leu Leu Val Gly Ala Gln Asp Gly Asn Ser Ser Phe Leu Leu  
 450 455 460  
 Gln Gly Arg Thr Ala Gln Thr Gly Ser Ala Gln Ala Thr Asn Phe Ile  
 465 470 475 480  
 Ala Phe Ala Ala Gln Tyr Arg Ser Ser Ser Leu Gly Pro Val Thr Val  
 485 490 495  
 Gln Trp Leu Leu Glu Pro His Asp Ala Ile Arg Val Leu Leu Asp Asn  
 500 505 510  
 Gln Thr Val Thr Phe Gln Pro Asp His Glu Asp Gly Gly Gly Gln Glu  
 515 520 525  
 Thr Phe Asn Ala Thr Gly Val Leu Leu Ser Arg Asn Gly Ser Glu Val  
 530 535 540  
 Ser Ala Ser Phe Asp Gly Trp Ala Thr Val Ser Val Ile Ala Leu Ser  
 545 550 555 560  
 Asn Ile Leu His Ala Ser Ala Ser Leu Pro Pro Glu Tyr Gln Asn Arg

1185



```

          995              1000              1005
Pro Arg Arg Ser Glu Glu Pro Arg Asn Asp Val Val Phe Gln Pro Ile
  1010              1015              1020
Ser Gly Glu Asp Val Arg Asp Val Thr Ala Leu Asn Val Ser Thr Leu
1025              1030              1035              1040
Lys Ala Tyr Phe Arg Cys Asp Gly Tyr Lys Gly Tyr Asp Leu Val Tyr
          1045              1050              1055
Ser Pro Gln Ser Gly Phe Thr Cys Val Ser Pro Cys Ser Arg Gly Tyr
          1060              1065              1070
Cys Asp His Gly Gly Gln Cys Gln His Leu Pro Ser Gly Pro Arg Cys
          1075              1080              1085
Ser Cys Val Ser Phe Ser Ile Tyr Thr Ala Trp Gly Glu His Cys Glu
          1090              1095              1100
His Leu Ser Met Lys Leu Asp Ala Phe Phe Gly Ile Phe Phe Gly Ala
1105              1110              1115              1120
Leu Gly Gly Leu Leu Leu Leu Gly Val Gly Thr Phe Val Val Leu Arg
          1125              1130              1135
Phe Trp Gly Cys Ser Gly Ala Arg Phe Ser Tyr Phe Leu Asn Ser Ala
          1140              1145              1150
Glu Ala Leu Pro
          1155

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&lt;210&gt; 1391

&lt;211&gt; 481

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1391

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480
c
481

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&lt;210&gt; 1392

&lt;211&gt; 160

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1392

```

Val Asp Gly Ile Glu Val His Asp Lys Ala Thr Asp Leu Asn Arg Leu

```

|   |     |     |     |
|---|-----|-----|-----|
| 1   | 5   | 10  | 15  |
| Arg Gln Lys Ile Gly Ile Val Phe Gln Gln Trp Asn Ala Phe Pro His |     |     |     |
| 20  | 25  | 30  |     |
| Leu Thr Val Leu Glu Asn Val Met Leu Ala Pro Arg Lys Val Leu Gly |     |     |     |
| 35  | 40  | 45  |     |
| Lys Ser Lys Gln Lys Ala Glu Glu Leu Ala Val Arg Gln Leu Thr His |     |     |     |
| 50  | 55  | 60  |     |
| Val Gly Leu Ser Asp Lys Leu Lys Thr Phe Pro Ala Xaa Leu Ser Gly |     |     |     |
| 65  | 70  | 75  | 80  |
| Gly Gln Gln Gln Arg Met Ala Ile Ala Arg Ala Leu Ala Met Ser Pro |     |     |     |
| 85  | 90  | 95  |     |
| Asp Tyr Met Leu Phe Asp Glu Ala Thr Ser Ala Leu Asp Pro Gln Leu |     |     |     |
| 100   | 105 | 110 |     |
| Val Gly Glu Val Leu Asp Thr Met Arg Met Leu Ala Glu Asp Gly Met |     |     |     |
| 115   | 120 | 125 |     |
| Thr Met Val Leu Val Thr His Glu Ile Arg Phe Ala Arg Asp Val Ser |     |     |     |
| 130   | 135 | 140 |     |
| Asp Arg Val Ala Phe Phe Arg Asn Gly Leu Val His Glu Ile Gly Ala |     |     |     |
| 145   | 150 | 155 | 160 |

&lt;210&gt; 1393

&lt;211&gt; 309

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1393

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 tacgaacccg acgaacacgg acaccgcaag cccgagtcgt tgtacggcgc ggtcaagatg  
 120  
 tggggcccttc tgcgccgtca gggcatcagg tggcccgcgtg cancggtgga gcgcctcatg  
 180  
 cgggacaacc ggtggcgtgg ggtgacccgc cgtaagaagg ttncgcacca ccatcgctga  
 240  
 cccggctgcc gggcgagccc cggatctggt ggaccgccag ttccgcgtcg aggcgcccac  
 300  
 caagttgct  
 309

&lt;210&gt; 1394

&lt;211&gt; 79

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1394

|   |    |    |    |
|---|----|----|----|
| Arg Pro Pro Ser Ala Arg Ala Leu Trp Asp Met Ala Ile Thr Glu Val |    |    |    |
| 1   | 5  | 10 | 15 |
| Leu Ala Gly Tyr Glu Pro Asp Glu His Gly His Arg Lys Pro Glu     |    |    |    |
| 20  | 25 | 30 |    |
| Ser Leu Tyr Gly Ala Val Lys Met Trp Ala Leu Leu Arg Arg Gln Gly |    |    |    |
| 35  | 40 | 45 |    |
| Ile Arg Trp Pro Ala Ala Xaa Val Glu Arg Leu Met Arg Asp Asn Arg |    |    |    |
| 50  | 55 | 60 |    |
| Trp Arg Gly Val Thr Arg Arg Lys Lys Val Xaa His His His Arg     |    |    |    |

65

70

75

<210> 1395  
 <211> 347  
 <212> DNA  
 <213> Homo sapiens

<400> 1395  
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 120  
 ccagattctt aaaggcggtc gcgatgttgc ccgggcgaca agggccttgg ctggacgggt  
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 gtcggtggggg gagatcccct cagttgcact agagcacgtg gccgatgacg tggagggtatt  
 240  
 ggctcaggct aggcgggctc atgcagtggg cggaagcggt tccgacgccc tcattgccac  
 300  
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 347

<210> 1396  
 <211> 95  
 <212> PRT  
 <213> Homo sapiens

<400> 1396  
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 Arg Arg Arg Ala Gln Ile Leu Lys Gly Gly Arg Asp Val Ala Arg Ala  
 20 25 30  
 Thr Arg Ala Leu Ala Gly Arg Val Ser Val Gly Glu Ile Pro Ser Val  
 35 40 45  
 Ala Leu Glu His Val Ala Asp Asp Val Glu Val Leu Ala Gln Ala Arg  
 50 55 60  
 Arg Ala His Ala Val Gly Gly Ser Val Ser Asp Ala Leu Ile Ala Thr  
 65 70 75 80  
 Ser Arg Gln Pro Gly Met Ala Gly Leu Val Pro Leu Ala His Ala  
 85 90 95

<210> 1397  
 <211> 308  
 <212> DNA  
 <213> Homo sapiens

<400> 1397  
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 ctggccccgcg tcgcgattgc cgccactatc cattctccgg aacgcgcgca agacatggct  
 120  
 aaccgcttga gcaaacgcga agaaggcttc acgcaatggg tacgtgccgc acaggacgat  
 180  
 ggtcgactgt cctgcagcga cccggcgcttc gctgcccacc agatacaaag cctgctcaag  
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300

gccaacgt  
308

<210> 1398  
<211> 93  
<212> PRT  
<213> Homo sapiens

<400> 1398  
Met Gln Met Met Ser Asp Thr Asn Phe Leu Asp Leu Ala Arg Val Ala  
1 5 10 15  
Ile Ala Ala Thr Ile His Ser Pro Glu Arg Ala Gln Asp Met Val Asn  
20 25 30  
Arg Leu Ser Lys Arg Glu Glu Gly Phe Thr Gln Trp Val Arg Ala Ala  
35 40 45  
Gln Asp Asp Gly Arg Leu Ser Cys Ser Asp Pro Ala Phe Ala Ala His  
50 55 60  
Gln Ile Gln Ser Leu Leu Lys Ala Phe Ala Phe Trp Pro Gln Ile Thr  
65 70 75 80  
Leu Gly Gln Pro Val Leu Asp Ala Ala Ser Gln Ala Asn  
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<210> 1399  
<211> 539  
<212> DNA  
<213> Homo sapiens

<400> 1399  
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120  
ttagatattt taacttcac agtactatct gtagtaggag gctgatttta ctaaaattag  
180  
ataattatat acatctgttc ctattccttt ggtaggacct ttaagaaagt catgctgaat  
240  
ctgagaatgc caggacattt cacgtggtat gaatgtagga tattcattta cacatcgctg  
300  
cacagacagc ctctatataa cccaccctgt tggggatttg aattttttct tttcccgccc  
360  
tacttttaaa tcttgtcatg taatttcaac acataatttg tggcacttta gtttttttac  
420  
cctttatagt ttaataactt atacatgtac atgcttaaaa tgtcaaaca tacaatggg  
480  
aacaagaaa attgcttcac catctgtgaa cccctccttt ttagtcccc ttcacgcgt  
539

<210> 1400  
<211> 90  
<212> PRT  
<213> Homo sapiens

&lt;400&gt; 1400

```

Met Asn Val Gly Tyr Ser Phe Thr His Arg Cys Thr Asp Ser Leu Tyr
 1           5           10           15
Ile Thr His Pro Val Gly Val Leu Asn Phe Phe Phe Ser Arg Pro Thr
           20           25           30
Phe Lys Ser Cys His Val Ile Ser Thr His Asn Leu Trp His Phe Ser
           35           40           45
Phe Phe Thr Leu Tyr Ser Leu Ile Thr Tyr Thr Cys Thr Cys Leu Lys
           50           55           60
Cys Gln Thr Ile Gln Met Gly Thr Lys Lys Ile Ala Ser Pro Ser Val
65           70           75           80
Asn Pro Ser Phe Cys Ser Pro Leu His Ala
           85           90

```

&lt;210&gt; 1401

&lt;211&gt; 653

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1401

```

ttcgaggggt cacttggact caagcttcgc gaagtcggg acctcggacg accgattttt
60
cggtgtgca ccgtcaccgc aaggctggcg tgggttnnct catcaccggc gcggcgatgg
120
ncattgggggt ttgatggccg cgtttccttg ctgctgggcg cgatcctcat cgtcaccggc
180
ccaacggtga ttaaccgat cctgcgtcag ttgcgtccta cccggcgagt gagtgtcttg
240
ttgaggtggg aaggaatcgt cgtcgatccg ctgggcgcca tcctggcatt actggtgtat
300
caggccataa ccagcatcga ccatcttcc atcggacaag gcgtcttgaa tctggggctc
360
accctattgg tcgggctgct cttecgctggc cccatcgggt ggatcgtcac cgcgatgatg
420
aaacggcacc tcatcccgga ctctctacaa ggcgtgattt tcgttgggggt cgccgttgga
480
acgtgtgttg gcgctaactg cattcgggag gaatcgggccc tggtcgccgt tacgatgctc
540
ggcatctacc tggcgaacca ggcgaacctc gagcttgagc ccgtcatcga gttcaaggaa
600
cacctgcagg tgctcctcgt tggcgtccta ttcatcatgc ttgcaggacg cgt
653

```

&lt;210&gt; 1402

&lt;211&gt; 217

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1402

```

Phe Glu Gly Ser Leu Gly Leu Lys Leu Arg Glu Val Arg Asp Leu Gly
 1           5           10           15
Arg Pro Ile Phe Arg Leu Cys Thr Val Thr Ala Arg Leu Ala Trp Val
           20           25           30
Xaa Ser Ser Pro Ala Arg Arg Trp Xaa Leu Gly Phe Asp Gly Arg Val

```

```

      35      40      45
Ser Leu Leu Leu Gly Ala Ile Leu Ile Val Thr Gly Pro Thr Val Ile
      50      55      60
Asn Pro Ile Leu Arg Gln Leu Arg Pro Thr Arg Arg Val Ser Ala Leu
65      70      75      80
Leu Arg Trp Glu Gly Ile Val Val Asp Pro Leu Gly Ala Ile Leu Ala
      85      90      95
Leu Leu Val Tyr Gln Ala Ile Thr Ser Ile Asp Arg Ser Ser Ile Gly
      100      105      110
Gln Gly Val Leu Asn Leu Gly Leu Thr Leu Leu Val Gly Leu Leu Phe
      115      120      125
Ala Gly Pro Ile Gly Trp Ile Val Thr Ala Met Met Lys Arg His Leu
      130      135      140
Ile Pro Asp Phe Leu Gln Gly Val Ile Phe Val Gly Val Ala Val Gly
145      150      155      160
Thr Cys Val Gly Ala Asn Val Ile Arg Glu Glu Ser Gly Leu Val Ala
      165      170      175
Val Thr Met Leu Gly Ile Tyr Leu Ala Asn Gln Arg Asn Leu Glu Leu
      180      185      190
Glu Pro Val Ile Glu Phe Lys Glu His Leu Gln Val Leu Leu Val Gly
      195      200      205
Val Leu Phe Ile Met Leu Ala Gly Arg
      210      215

```

<210> 1403  
 <211> 393  
 <212> DNA  
 <213> Homo sapiens

```

<400> 1403
aagctttgca gtttcttggt atccaaatcc aggcgttctt ggtctttttc cacaacagtg
60
tgtgccacat gaaatggaac acggggcaaac atatctgac caggaaacat tagccaagta
120
tggtccttgg ggatcatgac tccacaagtt gggcatatct cctttatcag ctgcttgcca
180
gagcttcctt ccatctcttt cattatgacc tcaaaggag atggcacgct agtcttggac
240
gtcctagctt gtttccgaag ggctgtcaga gcctccctgt taccatttct tatcttatca
300
ttttccacca actgatgtct agccagaaga actttttctg catcagtctc aatatcaacc
360
agagcctctt gaagctgctt catgttgga tcc
393

```

<210> 1404  
 <211> 127  
 <212> PRT  
 <213> Homo sapiens

```

<400> 1404
Met Lys Gln Leu Gln Glu Ala Leu Val Asp Ile Glu Thr Asp Ala Glu
1      5      10      15
Lys Val Leu Leu Ala Arg His Gln Leu Val Glu Asn Asp Lys Ile Arg

```

```

      20      25      30
Asn Gly Asn Arg Glu Ala Leu Thr Ala Leu Arg Lys Gln Ala Arg Thr
      35      40      45
Ser Lys Thr Ser Val Pro Ser Pro Phe Glu Val Ile Met Lys Glu Met
      50      55      60
Glu Gly Ser Ser Gly Lys Gln Leu Ile Lys Glu Ile Cys Pro Thr Cys
65      70      75      80
Gly Asp His Asp Pro Lys Glu His Thr Trp Leu Met Phe Pro Gly Ser
      85      90      95
Asp Met Phe Ala Arg Val Pro Phe His Val Ala His Thr Val Val Glu
      100      105      110
Lys Asp Gln Glu Arg Leu Asp Leu Asp Thr Lys Lys Leu Gln Ser
      115      120      125

```

&lt;210&gt; 1405

&lt;211&gt; 421

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1405

```

nnccgactgc acaaggccct gggcacgaa ctgcccggcg cactgcaggt catcgtaaaa
60
ggcgaaacca gcctgcaatg gctcggcccg gacgaatggc tgctgatcgt gccagcggg
120
gaagagttcg ccgccgagca aaacctgcgt gccgccctgg gcgagttgca tatccaggtc
180
gtcaacgtca gcggtggcca gcagatcctc gaactcagcg gcccgaaact gcgcgacgtg
240
ctgatgaaat ccaccagcta cgacgtacac cccaacaact tcccgggtggg caaggcgggtg
300
ggcacgggtgt tcgccaagtc gcaactggtg atccgccata ccgccgaaga cacctgggaa
360
ctgctgatcc gtcgcagctt ctcggattac tgggtggctgt ggttgcagga cgcggctgca
420
t
421

```

&lt;210&gt; 1406

&lt;211&gt; 140

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1406

```

Xaa Arg Leu His Lys Ala Leu Gly Ile Glu Leu Pro Gly Ala Leu Gln
1      5      10      15
Val Ile Val Lys Gly Glu Thr Ser Leu Gln Trp Leu Gly Pro Asp Glu
      20      25      30
Trp Leu Leu Ile Val Pro Ser Gly Glu Glu Phe Ala Ala Glu Gln Asn
      35      40      45
Leu Arg Ala Ala Leu Gly Glu Leu His Ile Gln Val Val Asn Val Ser
      50      55      60
Gly Gly Gln Gln Ile Leu Glu Leu Ser Gly Pro Asn Val Arg Asp Val
65      70      75      80
Leu Met Lys Ser Thr Ser Tyr Asp Val His Pro Asn Asn Phe Pro Val

```

```
<210> 1408
<211> 335
<212> PRT
<213> Homo sapiens
```



&lt;400&gt; 1408

Xaa Gly Arg Glu Lys Leu Glu Leu Val Leu Ser Asn Leu Gln Ala Asp  
 1 5 10 15  
 Val Leu Glu Leu Leu Glu Phe Val Tyr Thr Gly Ser Leu Val Ile  
 20 25 30  
 Asp Ser Ala Asn Ala Lys Thr Leu Glu Ala Ala Ser Lys Phe Gln  
 35 40 45  
 Phe His Thr Phe Cys Lys Val Cys Val Ser Phe Leu Glu Lys Gln Leu  
 50 55 60  
 Thr Ala Ser Asn Cys Leu Gly Val Ala Ala Met Ala Glu Ala Met Gln  
 65 70 75 80  
 Cys Ser Glu Leu Tyr His Xaa Ala Lys Ala Phe Ala Leu Gln Ile Phe  
 85 90 95  
 Pro Glu Val Ala Ala Gln Glu Glu Ile Leu Ser Ile Ser Lys Asp Asp  
 100 105 110  
 Phe Ile Ala Tyr Val Ser Asn Asp Ser Leu Asn Thr Lys Ala Glu Glu  
 115 120 125  
 Leu Val Tyr Glu Thr Val Ile Lys Trp Ile Lys Lys Asp Pro Ala Thr  
 130 135 140  
 Arg Thr Gln Tyr Ala Ala Glu Leu Leu Ala Val Val Arg Leu Pro Phe  
 145 150 155 160  
 Ile His Pro Ser Tyr Leu Leu Asn Val Val Asp Asn Glu Glu Leu Ile  
 165 170 175  
 Lys Ser Ser Glu Ala Cys Arg Asp Leu Val Asn Glu Ala Lys Arg Tyr  
 180 185 190  
 His Met Leu Pro His Ala Arg Gln Glu Met Gln Thr Pro Arg Thr Arg  
 195 200 205  
 Pro Arg Leu Ser Ala Gly Val Ala Glu Val Ile Val Leu Val Gly Gly  
 210 215 220  
 Arg Gln Met Val Gly Met Thr Gln Arg Ser Leu Val Ala Val Thr Cys  
 225 230 235 240  
 Trp Asn Pro Gln Asn Asn Lys Trp Tyr Pro Leu Ala Ser Val Pro Phe  
 245 250 255  
 Leu Gly Pro Gly Phe Phe Ser Val Val Ser Ala Gly Ala Asn Ile Tyr  
 260 265 270  
 Leu Ser Gly Gly Met Glu Ser Gly Val Pro Leu Ala Asp Val Trp Cys  
 275 280 285  
 Tyr Met Ser Leu Leu Asp Asn Trp Asn Leu Val Ser Arg Met Pro Val  
 290 295 300  
 Pro Arg Cys Arg Pro His Ser Leu Val Tyr Asp Gly Lys Ile Tyr Thr  
 305 310 315 320  
 Leu Gly Gly Leu Gly Val Ala Gly Asn Val Asp His Val Glu Arg  
 325 330 335

&lt;210&gt; 1409

&lt;211&gt; 279

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1409

nnnatgaagt tcttggtttt ttcagaaaaa cgcgcttttt gctatgctgg cgcgcccgcg  
 60  
 gcacgagata gcaccatgca actgatcgat atcggcgctca acctgaccaa cagcagtttc  
 120

cacgaccaac aggccgcaat cgtcgagcgc gcgctggagg ccggcggttac gcaaagtctg  
 180  
 ctgacaggca ccagcctggc ggtcagcgaa caagccctgg aactgtgcca tcaactggat  
 240  
 gcaagcggcg cccacctgtt cgccacggcc ggcgtgcac  
 279

<210> 1410  
 <211> 93  
 <212> PRT  
 <213> Homo sapiens

<400> 1410  
 Xaa Met Lys Phe Leu Val Phe Ser Glu Lys Arg Ala Phe Cys Tyr Ala  
 1 5 10 15  
 Gly Arg Pro Ala Ala Arg Asp Ser Thr Met Gln Leu Ile Asp Ile Gly  
 20 25 30  
 Val Asn Leu Thr Asn Ser Ser Phe His Asp Gln Gln Ala Ala Ile Val  
 35 40 45  
 Glu Arg Ala Leu Glu Ala Gly Val Thr Gln Met Leu Leu Thr Gly Thr  
 50 55 60  
 Ser Leu Ala Val Ser Glu Gln Ala Leu Glu Leu Cys His Gln Leu Asp  
 65 70 75 80  
 Ala Ser Gly Ala His Leu Phe Ala Thr Ala Gly Val His  
 85 90

<210> 1411  
 <211> 321  
 <212> DNA  
 <213> Homo sapiens

<400> 1411  
 nnnctgtattt caggaatgaa gaacgaacct gaatggatgc ttgaatggcg cttgagtgc  
 60  
 tttcgtgaat ggtagaaat ggaagagcct agctgggctc atgtcgatta ccctaaaatt  
 120  
 gattttcaat ctatttctta ctattccgcg ccaaaaagca tgaaggataa gcctaagtgc  
 180  
 ttagacgaag tcgacctga attgttacgt acttatgaaa aactgggcat tcctctcata  
 240  
 gaacagcaaa tgcttgctgg tatcgccgta gatgctgtct ttgactcagt gtctgtcgtt  
 300  
 actacttttc gtcaaaagct t  
 321

<210> 1412  
 <211> 107  
 <212> PRT  
 <213> Homo sapiens

<400> 1412  
 Xaa Arg Ile Ser Gly Met Lys Asn Glu Pro Glu Trp Met Leu Glu Trp  
 1 5 10 15  
 Arg Leu Ser Ala Phe Arg Glu Trp Leu Glu Met Glu Glu Pro Ser Trp

```

                20                25                30
Ala His Val Asp Tyr Pro Lys Ile Asp Phe Gln Ser Ile Ser Tyr Tyr
                35                40                45
Ser Ala Pro Lys Ser Met Lys Asp Lys Pro Lys Ser Leu Asp Glu Val
                50                55                60
Asp Pro Glu Leu Leu Arg Thr Tyr Glu Lys Leu Gly Ile Pro Leu Ile
65                70                75                80
Glu Gln Gln Met Leu Ala Gly Ile Ala Val Asp Ala Val Phe Asp Ser
                85                90                95
Val Ser Val Val Thr Thr Phe Arg Gln Lys Leu
                100                105

```

<210> 1413  
 <211> 385  
 <212> DNA  
 <213> Homo sapiens

```

<400> 1413
atgacccatg acgtcagcga agccgtggcg attgccgacc gggatgatcct gatcgaagac
60
ggcgaaatcg gcctcgacct gatcatcgac ctgccacgtc cgcgtgcccg tggttcacac
120
cgcctggccg cgttgaagc cgaagtata aaccgtgtgc tgcataacc cngcacgaag
180
ccggaacccg aacatgttaa accgctgcct acgaaattgc gttgggctca ataactcata
240
gaggaacacc atcatgacta taaaagccat caacgtgcgt aaccagttaa aaggcaccat
300
caaggaaatc gtagtcggca acgtgctctc ggaaatcgac gtgcagaccg cctccgggat
360
cgtcacttct gtgatcacta cgcgt
385

```

<210> 1414  
 <211> 55  
 <212> PRT  
 <213> Homo sapiens

```

<400> 1414
Met Thr His Asp Val Ser Glu Ala Val Ala Ile Ala Asp Arg Val Ile
1          5          10          15
Leu Ile Glu Asp Gly Glu Ile Gly Leu Asp Leu Ile Ile Asp Leu Pro
                20                25                30
Arg Pro Arg Ala Arg Gly Ser His Arg Leu Ala Ala Leu Glu Ala Glu
                35                40                45
Val Ile Asn Arg Val Leu Ser
                50                55

```

<210> 1415  
 <211> 420  
 <212> DNA  
 <213> Homo sapiens

<400> 1415

acgcgtgcag gcaaacatta atatgagtta acaccacaca ggatgagact gtttgtacct  
60  
gtaactgtcc ttgtcatctg tcttgcagat ttagaagagg aatcagaaaag ctgggacaac  
120  
tctgaggctg aagaggagga gaaagcccct gtgttgccag agagtacaga agggcgggag  
180  
ctgaccacagg gcccggcaga gtcctcctct ctctcagget gtgggagctg gcagccccgg  
240  
aagctgccag tcttcaagtc cctccggcac atgaggcagg tcctgggtgc cccttctttc  
300  
cgcatgctgg cctggcacgt tctcatgggg aaccagggtga tctggaaaag cagagacgtg  
360  
gacctcgtcc agtcagcttt tgaagtactt cgggtgagaa catcttttcc ttaggtgtgc  
420

<210> 1416

<211> 123

<212> PRT

<213> Homo sapiens

<400> 1416

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Arg | Leu | Phe | Val | Pro | Val | Thr | Val | Leu | Val | Ile | Cys | Leu | Ala | Asp |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Leu | Glu | Glu | Glu | Ser | Glu | Ser | Trp | Asp | Asn | Ser | Glu | Ala | Glu | Glu | Glu |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Glu | Lys | Ala | Pro | Val | Leu | Pro | Glu | Ser | Thr | Glu | Gly | Arg | Glu | Leu | Thr |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Gln | Gly | Pro | Ala | Glu | Ser | Ser | Ser | Leu | Ser | Gly | Cys | Gly | Ser | Trp | Gln |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Pro | Arg | Lys | Leu | Pro | Val | Phe | Lys | Ser | Leu | Arg | His | Met | Arg | Gln | Val |
|     |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Leu | Gly | Ala | Pro | Ser | Phe | Arg | Met | Leu | Ala | Trp | His | Val | Leu | Met | Gly |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Asn | Gln | Val | Ile | Trp | Lys | Ser | Arg | Asp | Val | Asp | Leu | Val | Gln | Ser | Ala |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Phe | Glu | Val | Leu | Arg | Val | Arg | Thr | Ser | Phe | Pro |     |     |     |     |     |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     |     |     |     |     |

<210> 1417

<211> 5058

<212> DNA

<213> Homo sapiens

<400> 1417

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aaagctctgg tgggacaggg gcagcccctg gggagggagg agaggacca ggaaccggc  
120  
taggaggggtg gccacccat ttccagtgtg acctgttccc attccccat gtctcctccc  
180  
atccctcccg ccactcagct caggctgatg agaagcagag caacgggtgt atcgggtgtt  
240  
tctttcctgg tggggtagtg ggggtgggct gaggagagaa aagggtgatt agcgtggggc  
300

cccgccctct tttgtcctct tcccagggtc cctggccctt tcggagaaac gcacttggtt  
360  
cgggccagcc gcctgagggg acgggctcac gtctgtcct cactgtcag ctgtggggc  
420  
gtggagcttc ccaggggagc cagggggact tttgccgag ccatgaaggg ggcacgtgg  
480  
aggaggggtcc cctgggtgtc cctgagctgc ctgtgtctct gcctccttc gcagtgtgtc  
540  
ccaggaacca cagaggacac attaataact ggaagtaaaa ctctgcccc agtcacctca  
600  
acaggctcaa caacagcgac actagaggga caatcaactg cagcttcttc aaggacctct  
660  
aatcaggaca tatcagcttc atctcagaac caccagacta agagcacgga gaccaccagc  
720  
aaagctcaaa ccgacacct cagcgagatg atgacatcaa ctcttttttc tccccagt  
780  
gtacacaatg tgatggagac tgttacgcag gagacagctc ctccagatga aatgaccaca  
840  
tcatttcctt ccagtgtcac caacacactc atgatgacat caaagactat aacaatgaca  
900  
acctccacag actccactct tggaaacaca gaagagacat caacagcagg aactgaaagt  
960  
tctaccccag tgacctcagc agtctcaata acagctggac aggaaggaca atcacgaaaa  
1020  
acttcttga ggacctctat ccaagacaca tcagcttctt ctccagaacca ctggactcgg  
1080  
agcacgcaga ccaccaggga atctcaaacc agcaccctaa cacacagaac cacttcaact  
1140  
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1200  
tcagggtgaaa cagctacctc atccctctgt agtgtcacia acacatccat gatgacatca  
1260  
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1320  
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1380  
ccagaaggac aatcaccagc aactttctca aggacttcta ctccaggacac aacagctttt  
1440  
tctaagaacc accagactca gagcgtggag accaccagag tatctcaaata caacacctc  
1500  
aacacctca caccggttac aacatcaact gttttatcct caccaagtgg attcaacca  
1560  
agtggaacag tttctcagga gacattccct tctggtgaaa caaccatctc atcccttcc  
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agtgtcagca atacattcct ggtaacatca aagggtgtca gaatgccaat ctccagagac  
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tctactcttg gaaacacaga ggagacatca ctatctgtaa gtggaacctt ttctgcaatc  
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1860  
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1920

ctacatgaaa caacaacatg gccttcctca ttctccagca aaggccacac aacttgggtca  
1980  
caaacagaaac tgcctcaac atcaacaggt gctgccacta ggcttgtcac aggaaatcca  
2040  
tctacagggg cagctggcac tattccaagg gtccctctta aggtctcagc aataggggaa  
2100  
ccaggagagc ccaccacata ctctccccc agcacaactc tcccaaaaac aacagggggca  
2160  
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2220  
ccaagctaca gtgtgactca gatgataaaa acggccacat ccccatcttc ttcacctatg  
2280  
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2340  
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2400  
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2460  
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2520  
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2580  
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2700  
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2760  
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2880  
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2940  
tccacctcag gagagacgac aaggttttca tcaaaccctt ccaggagacag tcacacaacc  
3000  
cagtcaacaa ccgaattgct gtccgcctca gccagtcatg gtgccatccc agtaagcaca  
3060  
ggaatggcgt cttcgatcgt ccccggaacc tttcatccca ccctctctga ggctccact  
3120  
gcaggagagc cgacaggaca gtcaagccca acttctccca gtgcctctcc tcaggagaca  
3180  
gccgccattt cccgatggc ccagactcag aggacaagaa ccagcagagg gtctgacact  
3240  
atcagcctgg cgtcccaggc aaccgacacc ttctcaacag tcccaccac acctccatcg  
3300  
atcacatcca gtgggcttac atctccacaa acccagaccc acactctgtc accttcagga  
3360  
tctggtaaaa ccttcaccac ggccctcctc agcaacgcca cccctcttcc tgtcacctac  
3420  
gcttcctcgg catccacagg tcacaccacc cctcttcatg tcaccgatgc ttcctcagta  
3480  
tccacaggtc acgccacccc tcttctgtgc accagccctt cctcagtatc cacaggtgac  
3540

accacgctc ttctgtcac tagcccttcc tcagcatcct caggtcacgc cacctctctt  
3600  
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3660  
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3720  
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3780  
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3840  
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3900  
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3960  
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4020  
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4080  
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4260  
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4380  
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4440  
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4500  
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4560  
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4620  
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4680  
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4740  
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4800  
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4860  
ccttctcag catccacaag tcacgccacc tcttctctg tcaccgacac ttctcagca  
4920  
tccacaggtc acgccacccc ttttctgtc accgacactt cctcagcatc cacagggtcac  
4980  
gccacccctc ttctgtcac cgacacttcc tcagcatcca caggtcacgc caccctctt  
5040  
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5058

&lt;210&gt; 1418

&lt;211&gt; 1532

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1418

```

Met Lys Gly Ala Arg Trp Arg Arg Val Pro Trp Val Ser Leu Ser Cys
 1           5           10           15
Leu Cys Leu Cys Leu Leu Pro His Val Val Pro Gly Thr Thr Glu Asp
      20           25           30
Thr Leu Ile Thr Gly Ser Lys Thr Pro Ala Pro Val Thr Ser Thr Gly
      35           40           45
Ser Thr Thr Ala Thr Leu Glu Gly Gln Ser Thr Ala Ala Ser Ser Arg
      50           55           60
Thr Ser Asn Gln Asp Ile Ser Ala Ser Ser Gln Asn His Gln Thr Lys
65           70           75           80
Ser Thr Glu Thr Thr Ser Lys Ala Gln Thr Asp Thr Leu Thr Gln Met
      85           90           95
Met Thr Ser Thr Leu Phe Ser Ser Pro Ser Val His Asn Val Met Glu
      100          105          110
Thr Val Thr Gln Glu Thr Ala Pro Pro Asp Glu Met Thr Thr Ser Phe
      115          120          125
Pro Ser Ser Val Thr Asn Thr Leu Met Met Thr Ser Lys Thr Ile Thr
      130          135          140
Met Thr Thr Ser Thr Asp Ser Thr Leu Gly Asn Thr Glu Glu Thr Ser
145          150          155          160
Thr Ala Gly Thr Glu Ser Ser Thr Pro Val Thr Ser Ala Val Ser Ile
      165          170          175
Thr Ala Gly Gln Glu Gly Gln Ser Arg Lys Thr Ser Trp Arg Thr Ser
      180          185          190
Ile Gln Asp Thr Ser Ala Ser Ser Gln Asn His Trp Thr Arg Ser Thr
      195          200          205
Gln Thr Thr Arg Glu Ser Gln Thr Ser Thr Leu Thr His Arg Thr Thr
      210          215          220
Ser Thr Pro Ser Phe Ser Pro Ser Val His Asn Val Thr Gly Thr Val
225          230          235          240
Ser Gln Lys Thr Ser Pro Ser Gly Glu Thr Ala Thr Ser Ser Leu Cys
      245          250          255
Ser Val Thr Asn Thr Ser Met Met Thr Ser Glu Lys Ile Thr Val Thr
      260          265          270
Thr Ser Thr Gly Ser Thr Leu Gly Asn Pro Gly Glu Thr Ser Ser Val
      275          280          285
Pro Val Thr Gly Ser Leu Met Pro Val Thr Ser Ala Ala Leu Val Thr
      290          295          300
Val Asp Pro Glu Gly Gln Ser Pro Ala Thr Phe Ser Arg Thr Ser Thr
305          310          315          320
Gln Asp Thr Thr Ala Phe Ser Lys Asn His Gln Thr Gln Ser Val Glu
      325          330          335
Thr Thr Arg Val Ser Gln Ile Asn Thr Leu Asn Thr Leu Thr Pro Val
      340          345          350
Thr Thr Ser Thr Val Leu Ser Ser Pro Ser Gly Phe Asn Pro Ser Gly
      355          360          365
Thr Val Ser Gln Glu Thr Phe Pro Ser Gly Glu Thr Thr Ile Ser Ser
      370          375          380
Pro Ser Ser Val Ser Asn Thr Phe Leu Val Thr Ser Lys Val Phe Arg

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385          390          395          400
Met Pro Ile Ser Arg Asp Ser Thr Leu Gly Asn Thr Glu Glu Thr Ser
          405          410          415
Leu Ser Val Ser Gly Thr Ile Ser Ala Ile Thr Ser Lys Val Ser Thr
          420          425          430
Ile Trp Trp Ser Asp Thr Leu Ser Thr Ala Leu Ser Pro Ser Ser Leu
          435          440          445
Pro Pro Lys Ile Ser Thr Ala Phe His Thr Gln Gln Ser Glu Gly Ala
          450          455          460
Glu Thr Thr Gly Arg Pro His Glu Arg Ser Ser Phe Ser Pro Gly Val
465          470          475          480
Ser Gln Glu Ile Phe Thr Leu His Glu Thr Thr Thr Trp Pro Ser Ser
          485          490          495
Phe Ser Ser Lys Gly His Thr Thr Trp Ser Gln Thr Glu Leu Pro Ser
          500          505          510
Thr Ser Thr Gly Ala Ala Thr Arg Leu Val Thr Gly Asn Pro Ser Thr
          515          520          525
Gly Ala Ala Gly Thr Ile Pro Arg Val Pro Ser Lys Val Ser Ala Ile
          530          535          540
Gly Glu Pro Gly Glu Pro Thr Thr Tyr Ser Ser His Ser Thr Thr Leu
545          550          555          560
Pro Lys Thr Thr Gly Ala Gly Ala Gln Thr Gln Trp Thr Gln Glu Thr
          565          570          575
Gly Thr Thr Gly Glu Ala Leu Leu Ser Ser Pro Ser Tyr Ser Val Thr
          580          585          590
Gln Met Ile Lys Thr Ala Thr Ser Pro Ser Ser Ser Pro Met Leu Asp
          595          600          605
Arg His Thr Ser Gln Gln Ile Thr Thr Ala Pro Ser Thr Asn His Ser
          610          615          620
Thr Ile His Ser Thr Ser Thr Ser Pro Gln Glu Ser Pro Ala Val Ser
625          630          635          640
Gln Arg Gly His Thr Gln Ala Pro Gln Thr Thr Gln Glu Ser Gln Thr
          645          650          655
Thr Arg Ser Val Ser Pro Met Thr Asp Thr Lys Thr Val Thr Thr Pro
          660          665          670
Gly Ser Ser Phe Thr Ala Ser Gly His Ser Pro Ser Glu Ile Val Pro
          675          680          685
Gln Asp Ala Pro Thr Ile Ser Ala Ala Thr Thr Phe Ala Pro Ala Pro
          690          695          700
Thr Gly Asp Gly His Thr Thr Gln Ala Pro Thr Thr Ala Leu Gln Ala
705          710          715          720
Thr Pro Ser Ser His Asp Ala Thr Leu Gly Pro Ser Gly Gly Thr Ser
          725          730          735
Leu Ser Lys Thr Gly Ala Leu Thr Leu Ala Asn Ser Val Val Ser Thr
          740          745          750
Pro Gly Gly Pro Glu Gly Gln Trp Thr Ser Ala Ser Ala Ser Thr Ser
          755          760          765
Pro Asp Thr Ala Ala Ala Met Thr His Thr His Gln Ala Glu Ser Thr
          770          775          780
Glu Ala Ser Gly Gln Thr Gln Thr Ser Glu Pro Ala Ser Ser Gly Ser
785          790          795          800
Arg Thr Thr Ser Ala Gly Thr Ala Thr Pro Ser Ser Ser Gly Ala Ser
          805          810          815
Gly Thr Thr Pro Ser Gly Ser Glu Gly Ile Ser Thr Ser Gly Glu Thr

```

1203

|   |      |      |
|---|------|------|
| 1250  | 1255 | 1260 |
| Gly His Ala Thr Pro Leu His Val Thr Asp Ala Ser Ser Val Ser Thr |      |      |
| 1265  | 1270 | 1275 |
| Gly Asp Thr Thr Pro Leu Pro Val Thr Ser Pro Ser Ser Ala Ser Thr |      | 1280 |
|   | 1285 | 1290 |
| Gly Asp Thr Thr Pro Leu Pro Val Thr Asp Thr Ser Ser Val Ser Thr |      | 1295 |
|   | 1300 | 1305 |
| Gly Asp Thr Thr Pro Leu Leu Val Thr Asp Thr Ser Ser Val Ser Thr |      | 1310 |
|   | 1315 | 1320 |
| Ser His Ala Thr Ser Leu Pro Val Thr Asp Thr Ser Ser Val Ser Thr |      | 1325 |
|   | 1330 | 1335 |
| Ser His Ala Thr Ser Leu Pro Val Thr Asp Pro Ser Ser Ala Ser Thr |      | 1340 |
| 1345  | 1350 | 1355 |
| Gly Asp Thr Thr Pro Leu Pro Val Thr Asp Thr Ser Ser Val Ser Thr |      | 1360 |
|   | 1365 | 1370 |
| Gly His Ala Thr Ser Leu Pro Val Thr Asp Thr Ser Ser Ala Ser Thr |      | 1375 |
|   | 1380 | 1385 |
| Gly Asp Thr Thr Ser Leu Pro Val Thr Asp Thr Ser Ser Ala Ser Thr |      | 1390 |
|   | 1395 | 1400 |
| Gly His Ala Thr Pro Leu Pro Val Thr Asp Thr Ser Ser Ala Ser Thr |      | 1405 |
|   | 1410 | 1415 |
| Gly His Ala Thr Pro Leu Leu Val Thr Asp Thr Ser Ser Ala Ser Thr |      | 1420 |
| 1425  | 1430 | 1435 |
| Gly His Thr Thr Pro Leu His Val Thr Ser Pro Ser Ser Ala Ser Thr |      | 1440 |
|   | 1445 | 1450 |
| Gly His Ala Thr Pro Leu Pro Val Thr Ser Pro Ser Ser Ala Ser Thr |      | 1455 |
|   | 1460 | 1465 |
| Ser His Ala Thr Ser Leu Pro Val Thr Asp Thr Ser Ser Ala Ser Thr |      | 1470 |
|   | 1475 | 1480 |
| Gly His Ala Thr Pro Leu Leu Val Thr Asp Thr Ser Ser Ala Ser Thr |      | 1485 |
|   | 1490 | 1495 |
| Gly His Ala Thr Pro Leu Leu Val Thr Asp Thr Ser Ser Ala Ser Thr |      | 1500 |
| 1505  | 1510 | 1515 |
| Gly His Ala Thr Pro Leu Pro Val Thr Asp Thr Ser                 |      | 1520 |
|   | 1525 | 1530 |

&lt;210&gt; 1419

&lt;211&gt; 309

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1419

aaggctatgg gaattcaaaa gtatgtgttc tattccatcc acaactgtga caagcagcct  
60

gaggttcctt tgatggaaat caagtattgt actggtaaatt ttattcagga cagtggctctg  
120

gattatatca tcatccgttt gtgtgggttc atgcagggtc ttattgggca atatgctgtt  
180

cctatactag aagagaagtc cgtctgggga actgatgctc caactcggat tgcttacatg  
240

gatacccagg acgtagctcg actaacgttt atagctatgc ggaatgagaa ggccaacaag  
300

aaactcatg

309

<210> 1420  
 <211> 103  
 <212> PRT  
 <213> Homo sapiens

<400> 1420  
 Lys Ala Met Gly Ile Gln Lys Tyr Val Phe Tyr Ser Ile His Asn Cys  
 1 5 10 15  
 Asp Lys Gln Pro Glu Val Pro Leu Met Glu Ile Lys Tyr Cys Thr Gly  
 20 25 30  
 Lys Phe Ile Gln Asp Ser Gly Leu Asp Tyr Ile Ile Ile Arg Leu Cys  
 35 40 45  
 Gly Phe Met Gln Gly Leu Ile Gly Gln Tyr Ala Val Pro Ile Leu Glu  
 50 55 60  
 Glu Lys Ser Val Trp Gly Thr Asp Ala Pro Thr Arg Ile Ala Tyr Met  
 65 70 75 80  
 Asp Thr Gln Asp Val Ala Arg Leu Thr Phe Ile Ala Met Arg Asn Glu  
 85 90 95  
 Lys Ala Asn Lys Lys Leu Met  
 100

<210> 1421  
 <211> 385  
 <212> DNA  
 <213> Homo sapiens

<400> 1421  
 ccattggcggc atgggtggag agagaagctg gggagaagaa atgatgcaga gatctcgcca  
 60  
 ggccaggagg ctgggctggg cagccaggag tagagaaaca acgctcccag aggaggggag  
 120  
 gatgttagag caaagccgag ccagctgctt ggcgaatgca tctgtgatgc ccattgagcag  
 180  
 ccaggatttc agctccgctc tacttcttga ctgctgcaga actcagcacc agctccagtg  
 240  
 ccctcagagc cctgattttt cacaaccga ctctccaag cctcccctgt gggcgggata  
 300  
 cacaagccag agtcgccttg tcacatctct tctctctcca ccaggtcatt ggcaaacctt  
 360  
 cctgacatac tttagacat tacag  
 385

<210> 1422  
 <211> 125  
 <212> PRT  
 <213> Homo sapiens

<400> 1422  
 Met Gly Gly Glu Arg Ser Trp Gly Glu Glu Met Met Gln Arg Ser Arg  
 1 5 10 15  
 Gln Ala Arg Glu Leu Gly Trp Ala Ala Arg Ser Arg Glu Thr Thr Leu  
 20 25 30  
 Pro Glu Glu Gly Arg Met Leu Glu Gln Ser Arg Ala Gln Leu Leu Ala

```

      35              40              45
Asn Ala Ser Val Met Pro Met Ser Ser Gln Asp Phe Ser Ser Ala Leu
  50              55              60
Leu Leu Asp Cys Cys Arg Thr Gln His Gln Leu Gln Cys Pro Gln Ser
  65              70              75              80
Pro Asp Phe Ser Gln Thr Asp Ser Ser Lys Pro Pro Leu Trp Ala Gly
      85              90              95
Tyr Thr Ser Gln Ser Arg Leu Val Thr Ser Leu Leu Ser Pro Pro Gly
      100              105              110
His Gly Gln Thr Phe Leu Thr Tyr Phe Thr Thr Leu Gln
      115              120              125

```

&lt;210&gt; 1423

&lt;211&gt; 336

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1423

```

nntattcttc aatccttcca caatgtgcaa caaatggcga ttgactggct cactcgaaat
  60
ctctattttg tggaccatgt cgggtgaccgg atctttgttt gtaattccaa cggttctgta
  120
tgtgtcacc c tgattgatct ggagcttcac aatcctaaag caatagcagt agatccaata
  180
gcaggaaaac ttttctttac tgactacggg aatgtcgcca aagtggagag atgtgacatg
  240
gatgggatga accgaacaag gataattgat tcaaagacag agcagccagc tgcactggca
  300
ctagacctag tcaacaaatt gggttactgg gtagat
  336

```

&lt;210&gt; 1424

&lt;211&gt; 112

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1424

```

Xaa Ile Leu Gln Ser Phe His Asn Val Gln Gln Met Ala Ile Asp Trp
  1              5              10              15
Leu Thr Arg Asn Leu Tyr Phe Val Asp His Val Gly Asp Arg Ile Phe
      20              25              30
Val Cys Asn Ser Asn Gly Ser Val Cys Val Thr Leu Ile Asp Leu Glu
      35              40              45
Leu His Asn Pro Lys Ala Ile Ala Val Asp Pro Ile Ala Gly Lys Leu
      50              55              60
Phe Phe Thr Asp Tyr Gly Asn Val Ala Lys Val Glu Arg Cys Asp Met
  65              70              75              80
Asp Gly Met Asn Arg Thr Arg Ile Ile Asp Ser Lys Thr Glu Gln Pro
      85              90              95
Ala Ala Leu Ala Leu Asp Leu Val Asn Lys Leu Val Tyr Trp Val Asp
      100              105              110

```

&lt;210&gt; 1425

&lt;211&gt; 672

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1425

```

accggtgttt tcgatcacct gggcgggttg agtgactatc gcagtcagat cggcccgatg
60
gcccggcgatg tcgaagacct ggccttggcg ctacagggtca ttgccggtga agatggggtc
120
gatgccgggg tgattccgat gccgtgcgc cgtatgcaaa ctcaaacgct gaaggggttg
180
cgagtcgcct ggtacagcga tgggtggcatt gagcccggtg acgcgctcac gcacaccaca
240
ttgcaggcgg tcgccgatct attggacgct gaaggcgcct tgatccgccc ggccttcccc
300
tcggcggtga gcaatgcccg tgacattacc gaacgctatt gggcaatgag tcaaagctcc
360
ggcgcgcagt cgatccagct gttttcagat tgggatcagt tccgtacagc catgctgggg
420
ttcatggccg actacgacat taccctgtgc cctgtcgatg ccgcgccggc gacccaactg
480
ggagagacgc ggccagggct gttcagttcc ccccttccta atggcttggc gggttggcct
540
tgtgtggtgg tccgggcccgg aacggatagc gcgggtttgc cggttggcgt gcagattgtc
600
gcgcgacctt ggcacgagcc tgtcgcgttg gcggcagcag cggccattga gcgcgcgctg
660
ccgttcacgc gt
672

```

&lt;210&gt; 1426

&lt;211&gt; 224

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1426

```

Thr Gly Val Phe Asp His Leu Gly Gly Leu Ser Asp Tyr Arg Ser Gln
1           5           10           15
Ile Gly Pro Met Ala Arg His Val Glu Asp Leu Ala Leu Ala Leu Gln
20          25          30
Val Ile Ala Gly Glu Asp Gly Val Asp Ala Gly Val Ile Pro Met Pro
35          40          45
Leu Arg Arg Met Gln Thr Gln Thr Leu Lys Gly Leu Arg Val Ala Trp
50          55          60
Tyr Ser Asp Gly Gly Ile Glu Pro Val Asp Ala Leu Thr His Thr Thr
65          70          75          80
Leu Gln Ala Val Ala Asp Leu Leu Asp Ala Glu Gly Ala Leu Ile Arg
85          90          95
Pro Ala Phe Pro Ser Ala Leu Ser Asn Ala Arg Asp Ile Thr Glu Arg
100         105         110
Tyr Trp Ala Met Ser Gln Ser Ser Gly Ala Gln Ser Ile Gln Leu Phe
115         120         125
Ser Asp Trp Asp Gln Phe Arg Thr Ala Met Leu Gly Phe Met Ala Asp
130         135         140
Tyr Asp Ile Ile Leu Cys Pro Val Asp Ala Ala Pro Ala Thr Gln Leu

```

```

145          150          155          160
Gly Glu Thr Arg Pro Gly Leu Phe Ser Ser Pro Leu Pro Asn Gly Leu
          165          170          175
Ala Gly Trp Pro Cys Val Val Val Arg Ala Gly Thr Asp Ser Ala Gly
          180          185          190
Leu Pro Val Gly Val Gln Ile Val Ala Arg Pro Trp His Glu Pro Val
          195          200          205
Ala Leu Ala Ala Ala Ala Ala Ile Glu Arg Ala Leu Pro Phe Thr Arg
          210          215          220

```

<210> 1427  
 <211> 270  
 <212> DNA  
 <213> Homo sapiens

```

<400> 1427
atggcttgct atctgaagca ggtggctgcc accgtctgca taaatgggcc cagcgcagtc
60
tttgatgttc cactaagata cggggatctg gtggtgacac ccatgcgact ggcttcggaa
120
ttgatgcaag tccatccctc aggggctgta cgcttcgctc actgttcagt tccccagaat
180
aaactcaact cacaaaagat acttccggtg gaaaaggccc aagggaagat cctcttcatt
240
gcaggagaga atgacgaaag cttggctagc
270

```

<210> 1428  
 <211> 90  
 <212> PRT  
 <213> Homo sapiens

```

<400> 1428
Met Ala Cys Tyr Leu Lys Gln Val Ala Ala Thr Val Cys Ile Asn Gly
1          5          10          15
Pro Ser Ala Val Phe Asp Val Pro Leu Arg Tyr Gly Asp Leu Val Val
          20          25          30
Thr Pro Met Arg Leu Ala Ser Glu Leu Met Gln Val His Pro Ser Gly
          35          40          45
Ala Val Arg Phe Arg His Cys Ser Val Pro Gln Asn Lys Leu Asn Ser
          50          55          60
Gln Lys Ile Leu Pro Val Glu Lys Ala Gln Gly Lys Ile Leu Phe Ile
65          70          75          80
Ala Gly Glu Asn Asp Glu Ser Leu Ala Ser
          85          90

```

<210> 1429  
 <211> 384  
 <212> DNA  
 <213> Homo sapiens

```

<400> 1429
ncctagggga ttatcgacat aaacgcgact gcgtaagggtt ggtgactcat cccccagcga
60

```

catgaggcaa acgccatgac atccgagaat gcaccgccgc gaggcaagat catcatgatg  
 120  
 gcggtgatcg ccggcgcggt ggtcaccaac atttactgca cccagccggt gctgccgttg  
 180  
 atcgccctcg acatgggcgt cgcagtgtcg acggtcaacc tgggtggcagg cgcggccttg  
 240  
 ctggggtttg ccaccgggtt ggcgttttta ttgcccatgg gcgaccgctt tgaccggcgc  
 300  
 aagctggtac tcgggcagat tgcgctggcg ttctgctttg ccttggcggc ggcttttgcg  
 360  
 ccgaggatct gggcgttgat cggc  
 384

<210> 1430  
 <211> 103  
 <212> PRT  
 <213> Homo sapiens

<400> 1430  
 Met Thr Ser Glu Asn Ala Pro Pro Arg Gly Lys Ile Ile Met Met Ala  
 1 5 10 15  
 Val Ile Ala Gly Ala Val Val Thr Asn Ile Tyr Cys Thr Gln Pro Val  
 20 25 30  
 Leu Pro Leu Ile Ala Ser Asp Met Gly Val Ala Val Ser Thr Val Asn  
 35 40 45  
 Leu Val Ala Gly Ala Ala Leu Leu Gly Phe Ala Thr Gly Leu Ala Phe  
 50 55 60  
 Leu Leu Pro Met Gly Asp Arg Phe Asp Arg Arg Lys Leu Val Leu Gly  
 65 70 75 80  
 Gln Ile Ala Leu Ala Phe Cys Phe Ala Leu Ala Ala Ala Phe Ala Pro  
 85 90 95  
 Arg Ile Trp Ala Leu Ile Gly  
 100

<210> 1431  
 <211> 414  
 <212> DNA  
 <213> Homo sapiens

<400> 1431  
 aagcttcagg gcaggtgtcc cctgaagtca agcctgattc tgcattcatc tgtatagcac  
 60  
 aaactggcga cacctgtgac tttgccttcc ccagggtccc tgctctccgc tccaggtagg  
 120  
 ctcagcctga gggagggtgct ggcaggagcc tcggaggcag gaggggctgg cgtgcttcac  
 180  
 tccttcagct tgtcttggga gagctgtggg ctgcatcccc ctggctcctc gtccacagg  
 240  
 cagccccgct gtgtgtctgg tcttgaggt tggctgcagc ttctgggccc tgcttccagc  
 300  
 ccctcttccc atgatactcc agccttgga ggtgtaatag tttcccatgt tgctgatctt  
 360  
 tagtttgct ccctctcctt ggctgttctt tctgctgttc cactctctgt gcac  
 414



<210> 1432  
 <211> 106  
 <212> PRT  
 <213> Homo sapiens

<400> 1432  
 Met Gly Asn Tyr Tyr Thr Phe Gln Gly Trp Arg Ile Met Gly Arg Gly  
 1 5 10 15  
 Ala Gly Ser Arg Ala Gln Lys Leu Gln Pro Thr Cys Lys Thr Arg His  
 20 25 30  
 Thr Ala Gly Leu Pro Val Gly Arg Gly Ala Arg Gly Met Gln Pro Thr  
 35 40 45  
 Ala Leu Pro Arg Gln Ala Glu Gly Val Lys His Ala Ser Pro Ser Cys  
 50 55 60  
 Leu Arg Gly Ser Cys Gln His Leu Pro Gln Ala Glu Pro Thr Trp Ser  
 65 70 75 80  
 Gly Glu Gln Gly Pro Trp Glu Arg Gln Ser His Arg Cys Arg Gln Phe  
 85 90 95  
 Val Leu Tyr Lys Met Met Gln Asn Gln Ala  
 100 105

<210> 1433  
 <211> 294  
 <212> DNA  
 <213> Homo sapiens

<400> 1433  
 aaattttcga tggaactggg cggcaatgca ccgtttattg tatttgatga tgcggatgtg  
 60  
 gacgcggccg tcagcaatgc tgtggcttgc aagttccgct gtggtggaca aacgtgcatt  
 120  
 tcggccaacc gaatctacgt gcacgaacaa gtgcacgacg agtttgtctc taagtttggc  
 180  
 gagagagtca agaagcttcg cgtgggctac ggtctggacg aaaacatcaa cattggaccg  
 240  
 ctagtgaatg aggctagtca ggacaaagca gagtcacatg tccgtgcatg gcaa  
 294

<210> 1434  
 <211> 98  
 <212> PRT  
 <213> Homo sapiens

<400> 1434  
 Lys Phe Ser Met Glu Leu Gly Gly Asn Ala Pro Phe Ile Val Phe Asp  
 1 5 10 15  
 Asp Ala Asp Val Asp Ala Ala Val Ser Asn Ala Val Ala Cys Lys Phe  
 20 25 30  
 Arg Cys Gly Gly Gln Thr Cys Ile Ser Ala Asn Arg Ile Tyr Val His  
 35 40 45  
 Glu Gln Val His Asp Glu Phe Val Ser Lys Phe Gly Glu Arg Val Lys  
 50 55 60  
 Lys Leu Arg Val Gly Tyr Gly Leu Asp Glu Asn Ile Asn Ile Gly Pro

65                                      70                                      75                                      80  
 Leu Val Asn Glu Ala Ser Gln Asp Lys Ala Glu Ser His Val Arg Ala  
    85                                      90                                      95  
 Met Gln

<210> 1435  
 <211> 1772  
 <212> DNA  
 <213> Homo sapiens

<400> 1435  
 ntctctgggt tatgtgggtt ccccggtgtg gaggtgggat ccactcccg catagtctct  
 60  
 cgtggcgatg ggacacctgg aaagtgtgt gatgtctttg aatgtgttaa tgatacaaa  
 120  
 ccagcctgcg tattaacaa tgtggaatat tatgatggag acatgtttcg aatggacaac  
 180  
 tgtcggttct gtcgatgcca agggggcggt gccatctgct tcactgcca gtgtggtgag  
 240  
 ataaactgcg agaggtacta cgtgcccga ggagagtgt gccagtggt tgaaatccag  
 300  
 tgtatccttt taataatccc gctggctgct gccaatggcc tgatccttgc ccacggagac  
 360  
 cgtggcggtg aagacgactg cacattctgc cagtgcgtca acggtgaacg ccactgctgt  
 420  
 gcgacctctc gcggacagac ctgcacaaac cctgtgaaag tgcctgggga gtgttgcct  
 480  
 gtgtgcgaag aaccaacct catcacagtt gatccacctg catgtgggga gttatcaaac  
 540  
 tgcactctga caggaagga ctgcattaat gggttcaaac gcgatcaca tggtgtgctg  
 600  
 acctgtcagt gcataaacac cgaggaacta tgttcagaac gtaaacagg ctgcacctg  
 660  
 aactgtccct tcgggttctt tactgatgcc caaaactgtg agatctgtga gtgccgcca  
 720  
 agggccaaga agtgcagacc cataatctgt gacaagtatt gtccacttgg attgtgaag  
 780  
 aataagcacg gctgtgacat ctgtcgctgt aagaaatgtc cagagctctc atgcagtaag  
 840  
 natctgccc ttgggttctc agcaggacag tcacggctgt cttatctgca agtgcagaga  
 900  
 ggctctgct tcagctgggc caccatcct gtcgggcact tgtctcaccg tggatggtca  
 960  
 tcatacaaaa aatgaggaga gctggcacga tgggtgccg gaatgtact gtctcaatgg  
 1020  
 acgggaaatg tgtgccctga tcacctgcc ggtgcctgcc tgtggcaacc ccaccattca  
 1080  
 ccctggacag tgctgcccac catgtgcaga tgactttgtg gtgcagaagc cagagctcag  
 1140  
 tactcennct ccatttgcca cgcccctgga ggagaatact ttgtggaagg agaaacgtgg  
 1200  
 aacattgact cctgtactca gtgcacctgc cacagcggac ggggtgctgt tgagacagag  
 1260

gtgtgcccac cgctgctctg ccagaacccc tcacgcaccc aggattcctg ctgcccacag  
 1320  
 tgtacagatc aaccttttcg gccttccttg tcccgcaata acagcgtacc taattactgc  
 1380  
 aaaaatgatg aaggggatat attcctggca gctgagtcct ggaagcctga cgtttgatcc  
 1440  
 agctgcatct gcattgatag cgtaattagc tgtttctctg agtcctgccc ttctgtatcc  
 1500  
 tgtgaaaaac ctgtcttgag aaaaggccag tgtgtccct actgcataga agacacaatt  
 1560  
 ccaaagaagg tgggtgtgcca cttcagtggg aaggcctatg ccgacgagga gcggtgggac  
 1620  
 cttgacagct gcacccactg ctactgcctg cagggccaga ccttctgctc gaccgtcagc  
 1680  
 tgccccctc tgccctgtgt tgagcccatc aacgtggaag gaagttgctg cccaatgtgt  
 1740  
 ccagaaatgt atgtccagc cccttcacgc gt  
 1772

&lt;210&gt; 1436

&lt;211&gt; 322

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1436

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Ser | Gly | Leu | Cys | Gly | Phe | Pro | Val | Cys | Glu | Val | Gly | Ser | Thr | Pro |
| 1   |     |     | 5   |     |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Arg | Ile | Val | Ser | Arg | Gly | Asp | Gly | Thr | Pro | Gly | Lys | Cys | Cys | Asp | Val |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Phe | Glu | Cys | Val | Asn | Asp | Thr | Lys | Pro | Ala | Cys | Val | Phe | Asn | Asn | Val |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Glu | Tyr | Tyr | Asp | Gly | Asp | Met | Phe | Arg | Met | Asp | Asn | Cys | Arg | Phe | Cys |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Arg | Cys | Gln | Gly | Gly | Val | Ala | Ile | Cys | Phe | Thr | Ala | Gln | Cys | Gly | Glu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Ile | Asn | Cys | Glu | Arg | Tyr | Tyr | Val | Pro | Glu | Gly | Glu | Cys | Cys | Pro | Val |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Cys | Glu | Ile | Gln | Cys | Ile | Leu | Leu | Ile | Ile | Pro | Leu | Ala | Ala | Ala | Asn |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Gly | Leu | Ile | Leu | Ala | His | Gly | Asp | Arg | Trp | Arg | Glu | Asp | Asp | Cys | Thr |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Phe | Cys | Gln | Cys | Val | Asn | Gly | Glu | Arg | His | Cys | Val | Ala | Thr | Val | Cys |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Gly | Gln | Thr | Cys | Thr | Asn | Pro | Val | Lys | Val | Pro | Gly | Glu | Cys | Cys | Pro |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Val | Cys | Glu | Glu | Pro | Thr | Ile | Ile | Thr | Val | Asp | Pro | Pro | Ala | Cys | Gly |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Glu | Leu | Ser | Asn | Cys | Thr | Leu | Thr | Gly | Lys | Asp | Cys | Ile | Asn | Gly | Phe |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Lys | Arg | Asp | His | Asn | Gly | Cys | Arg | Thr | Cys | Gln | Cys | Ile | Asn | Thr | Glu |
|     |     | 195 |     |     |     | 200 |     |     |     |     |     | 205 |     |     |     |
| Glu | Leu | Cys | Ser | Glu | Arg | Lys | Gln | Gly | Cys | Thr | Leu | Asn | Cys | Pro | Phe |
|     | 210 |     |     |     | 215 |     |     |     |     |     | 220 |     |     |     |     |
| Gly | Phe | Leu | Thr | Asp | Ala | Gln | Asn | Cys | Glu | Ile | Cys | Glu | Cys | Arg | Pro |

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225          230          235          240
Arg Pro Lys Lys Cys Arg Pro Ile Ile Cys Asp Lys Tyr Cys Pro Leu
          245          250          255
Gly Leu Leu Lys Asn Lys His Gly Cys Asp Ile Cys Arg Cys Lys Lys
          260          265          270
Cys Pro Glu Leu Ser Cys Ser Lys Xaa Leu Pro Leu Gly Phe Pro Ala
          275          280          285
Gly Gln Ser Arg Leu Ser Tyr Leu Gln Val Gln Arg Gly Leu Cys Phe
          290          295          300
Ser Trp Ala Thr His Pro Val Gly His Leu Ser His Arg Gly Trp Ser
305          310          315          320
Ser Ser

```

<210> 1437  
 <211> 372  
 <212> DNA  
 <213> Homo sapiens

```

<400> 1437
cgggaactgt gctcgccac catccggtga ccggtgtcgg gcagtggcaa ctcaacaccc
60
aggccatgac cggagccatc ccgagcagca ggtgcacggc ccgggccgtt gactcgtgga
120
cccgtaccct catgacctcg atgcaacttc cacggtggtc caccgatcac atcgaccgct
180
cgtccatgt cgatgctgag cagttcgacc ggttgcgcag cgagttcctg tcccgtgggc
240
acagttcttg ccctgccgca catggggtcc tgggacttgg ccggggcctg ggtggccaga
300
cgcggttctt ccccgagttc cgtcgcgag aatcttccga gggcacagtt cgagttgttc
360
tgccgcacgc gt
372

```

<210> 1438  
 <211> 62  
 <212> PRT  
 <213> Homo sapiens

```

<400> 1438
Met Ser Met Leu Ser Ser Ser Thr Gly Cys Ala Ala Ser Ser Cys Pro
1          5          10          15
Val Gly Thr Val Leu Ala Leu Pro His Met Gly Ser Trp Asp Leu Ala
20          25          30
Gly Ala Trp Val Ala Arg Arg Gly Phe Ser Pro Ser Ser Val Ala Glu
35          40          45
Asn Leu Pro Arg Ala Gln Phe Glu Leu Phe Cys Arg Thr Arg
50          55          60

```

<210> 1439  
 <211> 471  
 <212> DNA  
 <213> Homo sapiens

&lt;400&gt; 1439

accggtttgc tttccacaag gagagctaaa atgccggttg ctaagcagca tacatgccgc  
60  
tgcttctttc cacaatgtag acttaaaaaa atcgccgtaa acattttacc atatgattga  
120  
gtcaggtgtg gggagtcgca gtaaacattt taccatgtga ttgagtcatg ggtggggagt  
180  
cgcgaaaata cacagggcag gcagttcgt atcacgatgt tctctctcat ttctgtcttt  
240  
ggtctgtctt cctgggtaat gtcacatgga gaccagggg atctgccatc agctgtgtgc  
300  
agtgggttaa caagacgacg gggaacttca gagtgcaggc agtcctcatc tttggcagat  
360  
tctgtatttg cacattcacc cactcactga aatgcatttg taaccccaaa atcaatacag  
420  
cggtttcaca gtcattttcc gacacgggca gagggtgaa gatactgagt c  
471

&lt;210&gt; 1440

&lt;211&gt; 101

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1440

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gly | Gly | Glu | Ser | Arg | Lys | Tyr | Thr | Gly | Gln | Ala | Val | Arg | Tyr | His |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Asp | Val | Leu | Ser | His | Phe | Cys | Leu | Trp | Ser | Val | Phe | Leu | Gly | Asn | Val |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Thr | Trp | Arg | Pro | Arg | Gly | Ser | Ala | Ile | Ser | Cys | Val | Gln | Trp | Val | Asn |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Lys | Thr | Thr | Gly | Asn | Phe | Arg | Val | Gln | Ala | Val | Leu | Ile | Phe | Gly | Arg |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Phe | Cys | Ile | Cys | Thr | Phe | Thr | His | Ser | Leu | Lys | Cys | Ile | Cys | Asn | Pro |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Lys | Ile | Asn | Thr | Ala | Val | Ser | Gln | Ser | Phe | Ser | Asp | Thr | Gly | Arg | Gly |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Val | Lys | Ile | Leu | Ser |     |     |     |     |     |     |     |     |     |     |     |
|     |     |     |     | 100 |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 1441

&lt;211&gt; 376

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1441

nnngagtgcg ggggaccttc atggactctc tcgtgctccg tagctcacac tcaccgcacg  
60  
gcagctcaca ttcaccacac gggaactcac tctcaccaca cggcagctca ctctctctgc  
120  
accgcagctc acactcaccg cacggcagct cactctcacc gcacggcagc tcacactcac  
180  
cacacagcag ctactcttta ccggacgggg aacctaaact tacgggacgg gaagcctcac  
240

tctcaccgca cggaaagctc acactcaccg caccgcagcc actctcaccg cacggcagct  
 300  
 cactctcacc gcaccgcagc tcaactctcac cggacggggag ctcaactctca ccacacggca  
 360  
 cctcactctc acgcgt  
 376

<210> 1442  
 <211> 125  
 <212> PRT  
 <213> Homo sapiens

<400> 1442  
 Xaa Glu Ser Arg Gly Pro Ser Trp Thr Leu Ser Cys Ser Val Ala His  
 1 5 10 15  
 Thr His Arg Thr Ala Ala His Ile His His Thr Gly Thr His Ser His  
 20 25 30  
 His Thr Ala Ala His Ser Leu Cys Thr Ala Ala His Thr His Arg Thr  
 35 40 45  
 Ala Ala His Ser His Arg Thr Ala Ala His Thr His His Thr Ala Ala  
 50 55 60  
 His Ser Tyr Arg Thr Gly Asn Leu Asn Leu Pro Asp Gly Lys Pro His  
 65 70 75 80  
 Ser His Arg Thr Glu Ser Ser His Ser Pro His Arg Ser His Ser His  
 85 90 95  
 Arg Thr Ala Ala His Ser His Arg Thr Ala Ala His Ser His Arg Thr  
 100 105 110  
 Gly Ala His Ser His His Thr Ala Pro His Ser His Ala  
 115 120 125

<210> 1443  
 <211> 286  
 <212> DNA  
 <213> Homo sapiens

<400> 1443  
 atggcagccc tgcgtcccaa ggagctgccca caactaatgg tcgccatcgg caatgcgagc  
 60  
 ataaaaacgga caacacgctg cctgatcgaa tggcaactcc acaccatgac ccgtcctgcg  
 120  
 gaagccgcta cgacttctg ggctgacatc gactgcgaca agaaaaacctg gacgatccca  
 180  
 gcggagcgta tgaaaaagcg acgtgcccac gtcataccgc taaccgagca cgcacttgcc  
 240  
 ttgcttgaga caatcaaacc ctacagcggn cacagagagt acgcgt  
 286

<210> 1444  
 <211> 95  
 <212> PRT  
 <213> Homo sapiens

<400> 1444  
 Met Ala Ala Leu Arg Pro Lys Glu Leu Pro Gln Leu Met Val Ala Ile

```

      1           5           10           15
Gly Asn Ala Ser Ile Lys Arg Thr Thr Arg Cys Leu Ile Glu Trp Gln
      20           25           30
Leu His Thr Met Thr Arg Pro Ala Glu Ala Ala Thr Thr Ser Trp Ala
      35           40           45
Asp Ile Asp Cys Asp Lys Lys Thr Trp Thr Ile Pro Ala Glu Arg Met
      50           55           60
Lys Lys Arg Arg Ala His Val Ile Pro Leu Thr Glu His Ala Leu Ala
      65           70           75           80
Leu Leu Glu Thr Ile Lys Pro Tyr Ser Gly His Arg Glu Tyr Ala
      85           90           95

```

<210> 1445  
 <211> 294  
 <212> DNA  
 <213> Homo sapiens

```

<400> 1445
naccggttca cggggaggc cttcgatggg ggcaaggcca gcatggttgg cccgattccc
60
atgtacctgt atggcacctt cgctgttccg gacttcgacg cattcatctc cggcaagcag
120
actccctacc gggagacggg ctccaagcgg accactactt ggttctttcg agccgggtca
180
gaggtttatg agctggccnt ccccgagga gtcgtgttcg ccatgcaaag cgcctcgttg
240
agggtggacc ccgacaacac cgctcgacaag ctgccaacac tcggcgagcg cctg
294

```

<210> 1446  
 <211> 98  
 <212> PRT  
 <213> Homo sapiens

```

<400> 1446
Xaa Arg Phe Thr Gly Glu Ala Phe Asp Gly Gly Lys Val Ser Met Val
      1           5           10           15
Gly Pro Ile Pro Met Tyr Leu Tyr Gly Thr Phe Val Val Pro Asp Phe
      20           25           30
Asp Ala Phe Ile Ser Gly Lys Gln Thr Pro Tyr Arg Glu Thr Val Ser
      35           40           45
Lys Arg Thr Thr Thr Trp Phe Phe Arg Ala Gly Ser Glu Val Tyr Glu
      50           55           60
Leu Ala Xaa Pro Arg Gly Val Val Phe Ala Met Gln Ser Ala Ser Leu
      65           70           75           80
Arg Val Asp Pro Asp Asn Thr Val Asp Lys Leu Pro Thr Leu Gly Glu
      85           90           95
Arg Leu

```

<210> 1447  
 <211> 363  
 <212> DNA  
 <213> Homo sapiens

&lt;400&gt; 1447

nnncagaacc agaagatcaa cctgcatgac ggctcgttct cgcacgttgg cggcatgggtg  
 60  
 ggtaatatct ccattgcccc ggggtgtcacg atcgagaacg ccgtcggcgg ttcgggcaac  
 120  
 gtctgctga tcggcaacga tgcggccaac gaactgcgcg gcggtgccgg caacgatatc  
 180  
 ctctacgggg ctggcgggtgc cgaccagggtt tgggttggtt cgggcaacaa taccttcgtg  
 240  
 ttccgcgcg tttccgactc ggcgcgaaa gcggccgacc ggatcatgga cttcaccagt  
 300  
 ggccaggaca agatcgatct gtccgggatc acccatgggt cgggcctgac cttcgtcaac  
 360  
 gcg  
 363

&lt;210&gt; 1448

&lt;211&gt; 121

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1448

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Gln | Asn | Gln | Lys | Ile | Asn | Leu | His | Asp | Gly | Ser | Phe | Ser | Asp | Val |
| 1   |     |     | 5   |     |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Gly | Gly | Met | Val | Gly | Asn | Ile | Ser | Ile | Ala | Gln | Gly | Val | Thr | Ile | Glu |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     |     | 30  |     |     |
| Asn | Ala | Val | Gly | Gly | Ser | Gly | Asn | Asp | Leu | Leu | Ile | Gly | Asn | Asp | Ala |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |
| Ala | Asn | Glu | Leu | Arg | Gly | Gly | Ala | Gly | Asn | Asp | Ile | Leu | Tyr | Gly | Ala |
|     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |
| Gly | Gly | Ala | Asp | Gln | Val | Trp | Val | Gly | Ser | Gly | Asn | Asn | Thr | Phe | Val |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Phe | Ala | Ala | Val | Ser | Asp | Ser | Ala | Pro | Lys | Ala | Ala | Asp | Arg | Ile | Met |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Asp | Phe | Thr | Ser | Gly | Gln | Asp | Lys | Ile | Asp | Leu | Ser | Gly | Ile | Thr | His |
|     |     | 100 |     |     |     |     | 105 |     |     |     |     |     | 110 |     |     |
| Gly | Ser | Gly | Leu | Thr | Phe | Val | Asn | Ala |     |     |     |     |     |     |     |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     |     |     |     |     |

&lt;210&gt; 1449

&lt;211&gt; 541

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1449

aggcgtacc agattatggg ctgcccgacc tcaatgacat gcgcttgagc ctgcatgaat  
 60  
 cactcagcca atcgcgcttg gcgattgaac gctttatcca ggcgtacgag cctcgggttg  
 120  
 ggaatgtacg tgtcaggagg agggaggggtg cctacaaccc tttggtactg gcgtttgtga  
 180  
 ttgaggcaac cgtcgtcatc gatgggtgtca tccaacctgt ggtgtttaac gcacacctgg  
 240



tggggggggg gacgggtcga gtgtgttacc tgatgttctt tgagctcttt taccagagtg  
 300  
 aactcagtgc attgcgcacg cttgggcggc gtttttctga acgcaatccc gccctggcac  
 360  
 cctttcttgc cgattccagg ccaggacccg gacgtcgagg gtctattgaa agtctttgcc  
 420  
 tttctccccg ggcgcctgcg ccagaagctt gctgacgagc ttctgaggtt gacccattca  
 480  
 ttgatgcact tgggtgtggc caattacatg cggccattgc cggccttcag tattttgcag  
 540  
 t  
 541

<210> 1450  
 <211> 138  
 <212> PRT  
 <213> Homo sapiens

<400> 1450  
 Met Arg Leu Ser Leu His Glu Ser Leu Ser Gln Ser Arg Leu Ala Ile  
 1 5 10 15  
 Glu Arg Phe Ile Gln Ala Tyr Glu Pro Arg Leu Gly Asn Val Arg Val  
 20 25 30  
 Arg Arg Arg Glu Gly Ala Tyr Asn Pro Leu Val Leu Ala Phe Val Ile  
 35 40 45  
 Glu Ala Thr Val Val Ile Asp Gly Val Ile Gln Pro Val Val Phe Asn  
 50 55 60  
 Ala His Leu Val Gly Gly Gly Thr Gly Arg Val Cys Tyr Leu Met Phe  
 65 70 75 80  
 Phe Glu Leu Phe Tyr Gln Ser Glu Leu Ser Ala Leu Arg Thr Leu Gly  
 85 90 95  
 Arg Arg Phe Ser Glu Arg Asn Pro Ala Leu Ala Pro Phe Leu Ala Asp  
 100 105 110  
 Ser Arg Pro Gly Pro Gly Arg Arg Gly Ser Ile Glu Ser Leu Cys Leu  
 115 120 125  
 Ser Pro Arg Ala Pro Ala Pro Glu Ala Cys  
 130 135

<210> 1451  
 <211> 326  
 <212> DNA  
 <213> Homo sapiens

<400> 1451  
 aggctctgg cgagttgatc tacagcttcg gaccgggtgc tatggctact ggcgtcaagt  
 60  
 acacgaacac agtttgcact cctgtgggcg actacgaggt ggtgctgacg gattcttggg  
 120  
 gtgatggctg gaaccgggt tcttacctga acatgtacga cagctcggac aacttgatcc  
 180  
 aggagttcac gatggattac gacgcctctt ctcgtaacat taaggagaag cacggcttct  
 240  
 tcacgggtggc ttccaccacg agcagcggca ctgtctggaa gattatggcg aacaagaagg  
 300

tggacaagga gtggaactct gtggac  
326

<210> 1452  
<211> 95  
<212> PRT  
<213> Homo sapiens

<400> 1452  
Met Ala Thr Gly Val Lys Tyr Thr Asn Thr Val Cys Thr Pro Val Gly  
1 5 10 15  
Asp Tyr Glu Val Val Leu Thr Asp Ser Trp Gly Asp Gly Trp Asn Pro  
20 25 30  
Gly Ser Tyr Leu Asn Met Tyr Asp Ser Ser Asp Asn Leu Ile Gln Glu  
35 40 45  
Phe Thr Met Asp Tyr Asp Ala Ser Ser Arg Asn Ile Lys Glu Lys His  
50 55 60  
Gly Phe Phe Thr Val Ala Ser Thr Thr Ser Ser Gly Thr Val Trp Lys  
65 70 75 80  
Ile Met Ala Asn Lys Lys Val Asp Lys Glu Trp Asn Ser Val Asp  
85 90 95

<210> 1453  
<211> 326  
<212> DNA  
<213> Homo sapiens

<400> 1453  
cgggcgcgcg gccccacgtg caccgcgtgc atgggtccctc gaggacgcgc atctgcagcc  
60  
cccgtcccc gcaaacctcc aggccggaga gctccggcca aggccgctgc atcacatgat  
120  
acaggagggg catgcacacg ctcacgtgca cacagcctca aacacgctca tccgtacata  
180  
caggagtgtg tgaacgcact gaggtgcaca ggacaaagac acagacacct gtttgcacac  
240  
cgactcgcct atagaaatgt gcaaaccacc cgtgcgcaca ggccccctcca cccatgcagg  
300  
cgtgtgcaca tcacccacac ggacac  
326

<210> 1454  
<211> 98  
<212> PRT  
<213> Homo sapiens

<400> 1454  
Met Val Pro Arg Gly Arg Ala Ser Ala Ala Pro Ala Pro Arg Lys Pro  
1 5 10 15  
Pro Gly Arg Arg Ala Pro Ala Lys Ala Ala Ala Ser His Asp Thr Gly  
20 25 30  
Gly Ala Cys Thr Arg Ser Arg Ala His Ser Leu Lys His Ala His Pro  
35 40 45  
Tyr Ile Gln Glu Cys Val Asn Ala Leu Arg Cys Thr Gly Gln Arg His

```

      50              55              60
Arg His Leu Phe Ala His Arg Leu Ala Tyr Arg Asn Val Gln Thr Thr
65              70              75              80
Arg Ala His Arg Pro Leu His Pro Cys Arg Arg Val His Ile Thr His
      85              90              95
Thr Asp

```

<210> 1455  
 <211> 314  
 <212> DNA  
 <213> Homo sapiens

```

<400> 1455
gatccagtc aaaaagcatg tgggggttgct cacgctgggt ggaaaggtag tttgttgggt
60
gttgctatgg ctacagtga tgctatgata gcagaatatg gctgccgttt ggaaaaactt
120
tgggtggacct tggacccttc agtgggacct ggctgtttta ctcttcagg ggaatcagca
180
gaggcatttc ataattctca tcctgcatgt gtacaactat ttgattcacc aaatccctgt
240
atcgacatcc gtaaagccac aagatacttg actggatttt tgtataactg cttcctgcct
300
ccttccaaac tgac
314

```

<210> 1456  
 <211> 104  
 <212> PRT  
 <213> Homo sapiens

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<400> 1456
Asp Pro Val Lys Lys Ala Cys Gly Val Ala His Ala Gly Trp Lys Gly
1      5      10      15
Thr Leu Leu Gly Val Ala Met Ala Thr Val Asn Ala Met Ile Ala Glu
      20      25      30
Tyr Gly Cys Arg Leu Glu Lys Leu Trp Trp Thr Leu Asp Pro Ser Val
      35      40      45
Gly Pro Gly Cys Phe Thr Leu Pro Gly Glu Ser Ala Glu Ala Phe His
      50      55      60
Asn Leu His Pro Ala Cys Val Gln Leu Phe Asp Ser Pro Asn Pro Cys
65      70      75      80
Ile Asp Ile Arg Lys Ala Thr Arg Tyr Leu Thr Gly Phe Leu Tyr Asn
      85      90      95
Cys Phe Leu Pro Pro Ser Lys Leu
      100

```

<210> 1457  
 <211> 437  
 <212> DNA  
 <213> Homo sapiens

<400> 1457

nattcaccag aatccccaga atccccaaa tactacattg cacttttaggg ttcctttcta  
 60  
 gcacatgcat tgctaaaatc ggcgccaga accttctctg cccctctccc atgggatgca  
 120  
 atgtcagcgg agaaacagac caagtctgca ctagcctgtc cctacaccct cccagggaaa  
 180  
 aggtccccct gcgccaagtc aacagctccc agaggaagcc cactgactgc tctcttcagg  
 240  
 gtgggggaca caggaagtcc acgcttgac ggaggggacg ggcacaccta ccgtgactgc  
 300  
 cagagcccat tttgggagtc tgattggaat ttatacagca ggagcactgg gcaactcggac  
 360  
 aactccagcc cacaaccaag tcaactgggct gcctaccac tgcccaagtg cctcaagtca  
 420  
 acacattcct gcaactgn  
 437

<210> 1458

<211> 105

<212> PRT

<213> Homo sapiens

<400> 1458

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | Ala | Glu | Lys | Gln | Thr | Lys | Ser | Ala | Leu | Ala | Cys | Pro | Tyr | Thr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Leu | Pro | Arg | Lys | Arg | Ser | Pro | Cys | Ala | Lys | Ser | Thr | Ala | Pro | Arg | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ser | Pro | Leu | Thr | Ala | Leu | Phe | Arg | Val | Gly | Asp | Thr | Gly | Ser | Pro | Arg |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Leu | His | Gly | Gly | Asp | Gly | His | Thr | Tyr | Arg | Asp | Cys | Gln | Ser | Pro | Phe |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Trp | Glu | Ser | Asp | Trp | Asn | Leu | Tyr | Ser | Arg | Ser | Thr | Gly | His | Ser | Asp |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |
| Asn | Ser | Ser | Pro | Gln | Pro | Ser | His | Trp | Ala | Ala | Tyr | Pro | Leu | Pro | Lys |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Cys | Leu | Lys | Ser | Thr | His | Ser | Cys | Thr |     |     |     |     |     |     |     |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     |     |     |     |

<210> 1459

<211> 295

<212> DNA

<213> Homo sapiens

<400> 1459

ngagaggtca ccggccacga gattcccgcg gaggtcgcgc cccgccgcgc gggcgacccg  
 60  
 gccgtactca tcgcttcttc ggagaagatc aagcgggagc tgggctggaa cccgacgcgc  
 120  
 acggatctgc gccgcatcgt cgaggacgcc tgggccttta cggctggggg ggccgaacgg  
 180  
 taaacccttg gtaaggcgac gcagttatcc tcgatctcct cccagagcag gcggcagccc  
 240  
 gccactgagg tgctgagcat gccctcccac tccccgatcg ccatgagctg gcan  
 295

<210> 1460  
 <211> 60  
 <212> PRT  
 <213> Homo sapiens

<400> 1460  
 Xaa Glu Val Thr Gly His Glu Ile Pro Ala Glu Val Ala Pro Arg Arg  
   1                  5                  10                  15  
 Ala Gly Asp Pro Ala Val Leu Ile Ala Ser Ser Glu Lys Ile Lys Arg  
                   20                  25                  30  
 Glu Leu Gly Trp Asn Pro Thr Arg Thr Asp Leu Arg Arg Ile Val Glu  
                   35                  40                  45  
 Asp Ala Trp Ala Phe Thr Ala Gly Gly Ala Glu Arg  
       50                  55                  60

<210> 1461  
 <211> 432  
 <212> DNA  
 <213> Homo sapiens

<400> 1461  
 nnaagcttac gtgaaatgaa acgtcaatgg caacaggcga caatcgtgcc agagaaattg  
 60  
 gttgaagcac agtcaattgc gggttctaaa tgcgaacacg cctggcgctt acaacgttca  
 120  
 gaaaatgact gggtaggctt tgaaaaaaat tggaaagagg ttgttgcatc atccccgtgaa  
 180  
 gaagcacaaa ttgcggtga agcgcttaac ctaacgcctt atgatgcgat gcttgataag  
 240  
 tttgaaccag gcacgacaac gggttcgctc aatactttgt tttcaaaggt aaagacgtgg  
 300  
 ttacctacgt taattgaaaa agcgcttagaa aagcagcaat cagaatctat cattatgccca  
 360  
 tcaggcacct tttccacggc gaatcaaaaa gcccttggat tagaaataat gaaattgtta  
 420  
 aaattcgact tt  
 432

<210> 1462  
 <211> 144  
 <212> PRT  
 <213> Homo sapiens

<400> 1462  
 Xaa Ser Leu Arg Glu Met Lys Arg Gln Trp Gln Gln Ala Thr Ile Val  
   1                  5                  10                  15  
 Pro Glu Lys Leu Val Glu Ala Gln Ser Ile Ala Gly Ser Lys Cys Glu  
                   20                  25                  30  
 His Ala Trp Arg Leu Gln Arg Ser Glu Asn Asp Trp Val Gly Phe Glu  
                   35                  40                  45  
 Lys Asn Trp Lys Glu Val Val Ala Leu Ser Arg Glu Glu Ala Gln Ile  
       50                  55                  60  
 Arg Gly Glu Ala Leu Asn Leu Thr Pro Tyr Asp Ala Met Leu Asp Lys

```

65              70              75              80
Phe Glu Pro Gly Thr Thr Thr Val Ser Leu Asn Thr Leu Phe Ser Lys
              85              90              95
Val Lys Thr Trp Leu Pro Thr Leu Ile Glu Lys Ala Leu Glu Lys Gln
              100              105              110
Gln Ser Glu Ser Ile Ile Met Pro Ser Gly Thr Phe Ser Thr Ala Asn
              115              120              125
Gln Lys Ala Leu Gly Leu Glu Ile Met Lys Leu Leu Lys Phe Asp Phe
              130              135              140

```

<210> 1463  
 <211> 421  
 <212> DNA  
 <213> Homo sapiens

```

<400> 1463
nacgcgttcc agagcaagct ggacctgacc gccttcgaat tcttctccga caaggccctg
60
gccaaagtca tgggccgtgg cgacgtaccg gcaccgttcg aaaccgaatg cccgttctac
120
gcgctgctgg aattcgaagc caccaccgaa gaagtcgcca accacgccct ggaaaccttc
180
gagcactgcg ttgagcaggg ctgggtgctg gacggcgtga tgagccagag cgaaacccaa
240
ctgcacaacc tgtggaaact gcgcgagtac atctcggaga ctatttccca ctggacgccc
300
tacaagaacg acatctccgt gaccgtttcc aaagtccccg cgttcttgaa ggaaattgac
360
gcgattcgctg tgagcattac ccggacttcg aaattgttgg tcggccacat cggcgacgca
420
a
421

```

<210> 1464  
 <211> 140  
 <212> PRT  
 <213> Homo sapiens

```

<400> 1464
Xaa Ala Phe Gln Ser Lys Leu Asp Leu Thr Ala Phe Glu Phe Phe Ser
1          5          10          15
Asp Lys Ala Leu Ala Lys Val Met Gly Arg Gly Asp Val Pro Ala Pro
20          25          30
Phe Glu Thr Glu Cys Pro Phe Tyr Ala Leu Leu Glu Phe Glu Ala Thr
35          40          45
Thr Glu Glu Val Ala Asn His Ala Leu Glu Thr Phe Glu His Cys Val
50          55          60
Glu Gln Gly Trp Val Leu Asp Gly Val Met Ser Gln Ser Glu Thr Gln
65          70          75          80
Leu His Asn Leu Trp Lys Leu Arg Glu Tyr Ile Ser Glu Thr Ile Ser
85          90          95
His Trp Thr Pro Tyr Lys Asn Asp Ile Ser Val Thr Val Ser Lys Val
100         105         110
Pro Ala Phe Leu Lys Glu Ile Asp Ala Ile Val Val Ser Ile Thr Arg

```

115                      120                      125  
 Thr Ser Lys Leu Leu Val Gly His Ile Gly Asp Ala  
 130                      135                      140

<210> 1465  
 <211> 424  
 <212> DNA  
 <213> Homo sapiens

<400> 1465  
 gtgcacggtc tttgagctgc aattcccagg aatcaggggc cataggcggg agatggcatg  
 60  
 cagcctctcg ggcgggaaag tggctctacag tgcttgcttg cccgggcagg cagctcgtag  
 120  
 gcttatatgc ttagtggtta tggcccctac cactgttttt gaccgcgcta ccattcgcca  
 180  
 caacctcacc gaattcaaac tccggtggat ttcccacgcc gagcagtgga aggcggaaaa  
 240  
 ccgtcctgca acagagtcta aagccgctga gacggactgc tcagtacatg gggatctctg  
 300  
 gaccttggcc acggaagttt tcggtcaagc acccgaattc gacttcccat atatgaaact  
 360  
 cactcggcag gaatgtaggt tcctttttct gccgagaaac gacatcagct tgagctgctt  
 420  
 cacg  
 424

<210> 1466  
 <211> 124  
 <212> PRT  
 <213> Homo sapiens

<400> 1466  
 Met Ala Cys Ser Leu Ser Gly Gly Lys Val Val Tyr Ser Ala Cys Leu  
 1                      5                      10                      15  
 Pro Gly Gln Ala Ala Arg Arg Leu Ile Cys Leu Val Val Met Ala Pro  
 20                      25                      30  
 Thr Thr Val Phe Asp Arg Ala Thr Ile Arg His Asn Leu Thr Glu Phe  
 35                      40                      45  
 Lys Leu Arg Trp Ile Ser His Ala Glu Gln Trp Lys Ala Glu Asn Arg  
 50                      55                      60  
 Pro Ala Thr Glu Ser Lys Ala Ala Glu Thr Asp Cys Ser Val His Gly  
 65                      70                      75                      80  
 Asp Leu Trp Thr Leu Ala Thr Glu Val Phe Gly Gln Ala Pro Glu Phe  
 85                      90                      95  
 Asp Phe Pro Tyr Met Lys Leu Thr Arg Gln Glu Cys Arg Phe Leu Phe  
 100                      105                      110  
 Leu Pro Arg Asn Asp Ile Ser Leu Ser Cys Phe Thr  
 115                      120

<210> 1467  
 <211> 441  
 <212> DNA  
 <213> Homo sapiens

&lt;400&gt; 1467

nacgcgtgac ggcgaatgag cggcggaggc atgacaacga gcgcaccgtt ccgcagcttg  
 60  
 gtgccgtgca tcatggctca agtgccgcgc aactttcggc tgctcgagga gctggagaaa  
 120  
 ggcgaaaagg ggctaggaaa tggctcgtgc tcttacggcc ttgcgaacag tgatgacatt  
 180  
 cgtacgtatg cgctgtgct gatggctatg acaacgtgga atgccacgat cctaggcccg  
 240  
 gccaaactcgg tgcattgagaa ccgcataac tgctgcgcc tcgtgtgtgg cgactcgtac  
 300  
 cctcttgtgc cgctgagat ttggttccag acgcgcatca acttgccgtg cgtcgatgcc  
 360  
 cacacggggc gcgtcatgcc cgatcagttc tcgcccctct tgcattggcg tgatgagtac  
 420  
 actatggaaa gctgctgcat g  
 441

&lt;210&gt; 1468

&lt;211&gt; 123

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1468

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Gln | Val | Pro | Arg | Asn | Phe | Arg | Leu | Leu | Glu | Glu | Leu | Glu | Lys |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Gly | Glu | Lys | Gly | Leu | Gly | Asn | Gly | Ser | Cys | Ser | Tyr | Gly | Leu | Ala | Asn |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     | 30  |     |     |     |
| Ser | Asp | Asp | Ile | Arg | Thr | Tyr | Ala | Pro | Val | Leu | Met | Val | Met | Thr | Thr |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Trp | Asn | Ala | Thr | Ile | Leu | Gly | Pro | Ala | Asn | Ser | Val | His | Glu | Asn | Arg |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Ile | Tyr | Cys | Leu | Arg | Leu | Val | Cys | Gly | Asp | Ser | Tyr | Pro | Leu | Val | Pro |
| 65  |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     | 80  |     |
| Pro | Glu | Ile | Trp | Phe | Gln | Thr | Arg | Ile | Asn | Leu | Pro | Cys | Val | Asp | Ala |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     | 95  |     |     |
| His | Thr | Gly | Arg | Val | Met | Pro | Asp | Gln | Phe | Ser | Pro | Leu | Leu | His | Trp |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Arg | Asp | Glu | Tyr | Thr | Met | Glu | Ser | Cys | Cys | Met |     |     |     |     |     |
|     |     | 115 |     |     |     |     |     | 120 |     |     |     |     |     |     |     |

&lt;210&gt; 1469

&lt;211&gt; 468

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1469

nngctcgatc tagtctatgg gctaaatgat cgaccgaacc cttttattgc ttttttagcg  
 60  
 gcgcttcaac atcttttagc gatttttagtg ccaattgtca ccnctggatt attgatttgt  
 120  
 ttggcattag gcgtgtctcg cgaagacacc aatatgattc tttctatgtc attaattatt  
 180



tcagggatcg cgactttctt gcaatgtaaa aaagtgggtc catttggcgc tggattactt  
 240  
 attgttcaag gaactagctt taatttcatt ggtcctatca ttggtatagg tagctcaatg  
 300  
 gtggctgctg gcacacctgt cgaacaagtt atggctgcga tttttgggtg cgtaatcgca  
 360  
 gggttcattta tcgaaatggg cgtatctcaa attttacctt gggtaaaaaa gctgattact  
 420  
 cctctcggtta caggaatcgt cgttctgttg attggtctac cattaatg  
 468

<210> 1470  
 <211> 156  
 <212> PRT  
 <213> Homo sapiens

<400> 1470  
 Xaa Leu Asp Leu Val Tyr Gly Leu Asn Asp Arg Pro Asn Pro Phe Ile  
 1 5 10 15  
 Ala Phe Leu Ala Ala Leu Gln His Leu Leu Ala Ile Leu Val Pro Ile  
 20 25 30  
 Val Thr Xaa Gly Leu Leu Ile Cys Leu Ala Leu Gly Val Ser Arg Glu  
 35 40 45  
 Asp Thr Asn Met Ile Leu Ser Met Ser Leu Ile Ile Ser Gly Ile Ala  
 50 55 60  
 Thr Phe Leu Gln Cys Lys Lys Val Gly Pro Phe Gly Ala Gly Leu Leu  
 65 70 75 80  
 Ile Val Gln Gly Thr Ser Phe Asn Phe Ile Gly Pro Ile Ile Gly Ile  
 85 90 95  
 Gly Ser Ser Met Val Ala Ala Gly Thr Pro Val Glu Gln Val Met Ala  
 100 105 110  
 Ala Ile Phe Gly Val Val Ile Ala Gly Ser Phe Ile Glu Met Gly Val  
 115 120 125  
 Ser Gln Ile Leu Pro Trp Val Lys Lys Leu Ile Thr Pro Leu Val Thr  
 130 135 140  
 Gly Ile Val Val Leu Leu Ile Gly Leu Pro Leu Met  
 145 150 155

<210> 1471  
 <211> 341  
 <212> DNA  
 <213> Homo sapiens

<400> 1471  
 gcgtggatgg ggatcctgaa aaacaatggc gtgctgaata acttcttgct gtggctcggc  
 60  
 gttatcgatc agccgctgac gattttgcac accaatctgg cgggtgtatat cggcattgtg  
 120  
 tacgcttata tgccgtttat ggtactgccc atttatacgg cgctgacgcg cattgattac  
 180  
 tcgctgggtg aggcctcact ggatctcggg gcccgccgc tgaaaacggt tttcaatgtg  
 240  
 attgtccccg tcaccaaagg cggcattata gcggggtcga tgctgggtgt tatcccggcg  
 300

gtcggtagt ttgttatccc ggaactgctc ggcggcggcc g  
341

<210> 1472  
<211> 113  
<212> PRT  
<213> Homo sapiens

<400> 1472  
Ala Trp Met Gly Ile Leu Lys Asn Asn Gly Val Leu Asn Asn Phe Leu  
1 5 10 15  
Leu Trp Leu Gly Val Ile Asp Gln Pro Leu Thr Ile Leu His Thr Asn  
20 25 30  
Leu Ala Val Tyr Ile Gly Ile Val Tyr Ala Tyr Leu Pro Phe Met Val  
35 40 45  
Leu Pro Ile Tyr Thr Ala Leu Thr Arg Ile Asp Tyr Ser Leu Val Glu  
50 55 60  
Ala Ser Leu Asp Leu Gly Ala Arg Pro Leu Lys Thr Phe Phe Asn Val  
65 70 75 80  
Ile Val Pro Leu Thr Lys Gly Gly Ile Ile Ala Gly Ser Met Leu Val  
85 90 95  
Phe Ile Pro Ala Val Gly Glu Phe Val Ile Pro Glu Leu Leu Gly Gly  
100 105 110  
Gly

<210> 1473  
<211> 352  
<212> DNA  
<213> Homo sapiens

<400> 1473  
tccggaactg ctcaatgtct gtccagcaca taagatccat gcttgaagaa tgagtctcaa  
60  
gaaactgacg gaaatgttca aactccagtt tggtgttaag cagatcacta aacttaaaat  
120  
gcttgatttc tgcaggaaca ttatcccaat attctgttcg tttagagacg ttagagagtg  
180  
ataaaatgcc agttccaatt tcacaagtgg tgctctcagc tttcttgga aatgtctctt  
240  
tatgcaaagc ctgtagcttt ctgaagtatg tggagtctaa ctgtcgagtt tcttcacca  
300  
gtccacctt tttataagca atttggtccg attttaccat ctttgtccat gg  
352

<210> 1474  
<211> 113  
<212> PRT  
<213> Homo sapiens

<400> 1474  
Met Val Lys Ser Asp Gln Ile Ala Tyr Lys Lys Val Glu Leu Val Glu  
1 5 10 15  
Glu Thr Arg Gln Leu Asp Ser Thr Tyr Phe Arg Lys Leu Gln Ala Leu

```

                20                25                30
His Lys Glu Thr Phe Ser Lys Lys Ala Glu Asp Thr Thr Cys Glu Ile
                35                40                45
Gly Thr Gly Ile Leu Ser Leu Ser Asn Val Ser Lys Arg Thr Glu Tyr
                50                55                60
Trp Asp Asn Val Pro Ala Glu Tyr Lys His Phe Lys Phe Ser Asp Leu
65                70                75                80
Leu Asn Asn Lys Leu Glu Phe Glu His Phe Arg Gln Phe Leu Glu Thr
                85                90                95
His Ser Ser Ser Met Asp Leu Met Cys Trp Thr Asp Ile Glu Gln Phe
                100                105                110
Arg

```

<210> 1475  
 <211> 389  
 <212> DNA  
 <213> Homo sapiens

```

<400> 1475
accggtgccg gagccgatct ccacgatggt cttggcgccg gtgcggccga accactcatc
60
gacatcgata agctcatcgc ttaagacgcg gccagctcg ggccagcatt gctcaaaaag
120
ctggtgctgg ttgtccgtga gcgtgccgcg ggggaaaggg acctttgccc aggcgcgggt
180
agtccaggtc attatcaaag accgcattga agtccgtttg cggcgggcca cccggcggca
240
tttctccggc agggggtggt ttgagaatta tccgtgctat acatcgcgcc ctatttttcc
300
ctgtccaggc atggcaagca atatgccgcg ccgggtatatt tccccgccgt atggggaggg
360
ggataaccgg agcttgacgg ggtggtgtc
389

```

<210> 1476  
 <211> 121  
 <212> PRT  
 <213> Homo sapiens

```

<400> 1476
Met Val Leu Ala Pro Val Arg Pro Asn His Ser Ser Thr Ser Ile Ser
1                5                10                15
Ser Ser Leu Lys Thr Arg Pro Ser Ser Gly Gln His Cys Ser Lys Ser
                20                25                30
Trp Cys Trp Leu Ser Val Ser Val Pro Arg Gly Lys Gly Thr Phe Ala
35                40                45
Gln Ala Arg Val Val Gln Val Ile Ile Lys Asp Arg Ile Glu Val Arg
50                55                60
Leu Arg Arg Ala Thr Arg His Phe Ser Gly Arg Gly Cys Phe Glu
65                70                75                80
Asn Tyr Pro Cys Tyr Thr Ser Arg Pro Ile Phe Pro Cys Pro Gly Met
85                90                95
Ala Ser Asn Met Pro Arg Arg Val Phe Ser Pro Pro Tyr Gly Glu Gly

```

100 105 110  
 Asp Asn Arg Ser Leu Thr Gly Trp Cys  
 115 120

<210> 1477  
 <211> 500  
 <212> DNA  
 <213> Homo sapiens

<400> 1477  
 tacagcgaga atctgcacga taccacttc ctcaaacct attgcgttg cttcgagcaa  
 60  
 ttccctccctt atttgctggg ccaaacggac ggccaacct aagatgcccc atgggcatcg  
 120  
 gcgctgtgtg gtattgatgc cgaaatcatc cgggcactgg cccgccaaat ggcggccaac  
 180  
 cgtacgcaaa tcattgcggg ctggtgcgtg caacgtatgc aacacggcga acaatgggcg  
 240  
 tggatgacgg tagtgctggc ggcgatgctt ggccaaatcg gcttaccggg cggcgggttc  
 300  
 ggtttttggtt ggccctccaa cggcgcaggt acccccgagc cgcaaggggt gatcctgagc  
 360  
 ggttttctccg gttccccgcg tacgccggca cgccatgcc aagggggattt caaagggttac  
 420  
 agcagtacca ttccgatcgc gcgctttatc gatgccatgc tggagccggg caaggagatc  
 480  
 gattggaatg gcaaacgcgt  
 500

<210> 1478  
 <211> 166  
 <212> PRT  
 <213> Homo sapiens

<400> 1478  
 Tyr Ser Glu Asn Leu His Asp Thr His Phe Leu Lys Thr Tyr Cys Val  
 1 5 10 15  
 Gly Phe Glu Gln Phe Leu Pro Tyr Leu Leu Gly Gln Thr Asp Gly Gln  
 20 25 30  
 Pro Lys Asp Ala Gln Trp Ala Ser Ala Leu Cys Gly Ile Asp Ala Glu  
 35 40 45  
 Ile Ile Arg Ala Leu Ala Arg Gln Met Ala Ala Asn Arg Thr Gln Ile  
 50 55 60  
 Ile Ala Gly Trp Cys Val Gln Arg Met Gln His Gly Glu Gln Trp Ala  
 65 70 75 80  
 Trp Met Thr Val Val Leu Ala Ala Met Leu Gly Gln Ile Gly Leu Pro  
 85 90 95  
 Gly Gly Gly Phe Gly Phe Gly Trp Pro Ser Asn Gly Ala Gly Thr Pro  
 100 105 110  
 Glu Pro Gln Gly Val Ile Leu Ser Gly Phe Ser Gly Ser Pro Ala Thr  
 115 120 125  
 Pro Ala Arg His Ala Lys Gly Asp Phe Lys Gly Tyr Ser Ser Thr Ile  
 130 135 140  
 Pro Ile Ala Arg Phe Ile Asp Ala Met Leu Glu Pro Gly Lys Glu Ile

145 150 155 160

Asp Trp Asn Gly Lys Arg

165

<210> 1479

<211> 421

<212> DNA

<213> Homo sapiens

<400> 1479

acgcgtgtgg agctggcacc atgaaagcac gatgtgcac actcatagag gcaggcacac

60

ttaagtatgt tctttacatt gaaacagaaa ggaaagaaga taggaaaaat ggtgccagca

120

cgctgggctt tttttgtttg ctgttttggg tgggggtgtgc tagtgcagtg tccggtgtac

180

gcttttgtcc tcaaacaggc ttgttccccg gtcagagttt cattattggt gctggtaaac

240

aaatgccaag tttgacaaaa aacagtgaaa taaagcaaaa gattttgaaa aatgcttcat

300

catgtcagaa ggaaagaacc cttttcacgg gtgcctgccc acatttcctt gccagcctg

360

agaccctatt gactttgaat tatcttttgc tgttttattt ctatgaaaat tatatacgcg

420

t

421

<210> 1480

<211> 133

<212> PRT

<213> Homo sapiens

<400> 1480

Met Lys Ala Arg Cys Ala Ser Leu Ile Glu Ala Gly Thr Leu Lys Tyr

1 5 10 15

Val Leu Tyr Ile Glu Thr Glu Arg Lys Glu Asp Arg Lys Asn Gly Ala

20 25 30

Ser Thr Leu Gly Phe Phe Cys Leu Leu Phe Trp Val Gly Cys Ala Ser

35 40 45

Ala Val Ser Gly Val Arg Phe Cys Pro Gln Thr Gly Leu Phe Pro Gly

50 55 60

Gln Ser Phe Ile Ile Val Ala Gly Lys Gln Met Pro Ser Leu Thr Lys

65 70 75 80

Asn Ser Glu Ile Lys Gln Lys Ile Leu Lys Asn Ala Ser Ser Cys Gln

85 90 95

Lys Glu Arg Thr Leu Phe Thr Gly Ala Cys Pro His Phe Leu Ala Gln

100 105 110

Pro Glu Thr Leu Leu Thr Leu Asn Tyr Leu Leu Leu Phe Tyr Phe Tyr

115 120 125

Glu Asn Tyr Ile Arg

130

<210> 1481

<211> 545

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1481

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 60  
 tccggatgca gatgggagag ttggccacgc gcgattattt gcgctcggag ctacgcgacg  
 120  
 agttgcgctc cctgctcgag gagatcgagg cctcaccggc ctcccactaa ctgaccgggt  
 180  
 tcgcgacgag cgagttgtcg catcgggcca acggtgtgta gacaagtcag catgagcacc  
 240  
 gagaacccag tggtaaggc cattgccgat gcgttgctgc acgtcaatga ccccgagatc  
 300  
 aaacgccccca ttaccgatct caacatgatt gatgagatta ccgtcgacga gcaaggacgc  
 360  
 gctttcgtcc gcatcctgct gaccgtcgcc ggggtgtccc tcaagaccga gctgcgtgag  
 420  
 caggccaccg aggtgtgctg cagcgttgac ggggtgacca gtgtttccgt cgaactcggc  
 480  
 accatgaccg acgaacagcg cgatgctctc aaagttcagc tgcgcggtga cgtccccgaa  
 540  
 cgcgt  
 545

&lt;210&gt; 1482

&lt;211&gt; 104

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1482

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | Thr | Glu | Asn | Pro | Val | Val | Lys | Ala | Ile | Ala | Asp | Ala | Leu | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| His | Val | Asn | Asp | Pro | Glu | Ile | Lys | Arg | Pro | Ile | Thr | Asp | Leu | Asn | Met |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     |     | 30  |     |     |
| Ile | Asp | Glu | Ile | Thr | Val | Asp | Glu | Gln | Gly | Arg | Ala | Phe | Val | Arg | Ile |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Leu | Leu | Thr | Val | Ala | Gly | Cys | Pro | Leu | Lys | Thr | Glu | Leu | Arg | Glu | Gln |
|     |     | 50  |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |
| Ala | Thr | Glu | Ala | Val | Arg | Ser | Val | Asp | Gly | Val | Thr | Ser | Val | Ser | Val |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Glu | Leu | Gly | Thr | Met | Thr | Asp | Glu | Gln | Arg | Asp | Ala | Leu | Lys | Val | Gln |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Leu | Arg | Gly | Asp | Val | Pro | Glu | Arg |     |     |     |     |     |     |     |     |
|     |     |     |     | 100 |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 1483

&lt;211&gt; 625

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1483

gtacggcttc gagagggcta cagtgtccga gaggtcacac tggccaaagg aggggtcccaa  
 60

ttggaggtaa agctggtgct gctgtggaaa cacaacatgc gcattgagta tgtggctatg  
 120  
 gcacccctggc cccctggagcc tgagggccct cgagtaacac ggggtggaagt gacgatggaa  
 180  
 ggcggctacg acattttgca tgatgtgtcc tgtgcactaa ggcagcccat tcgttcattg  
 240  
 tategtaccc atgttatccg gcgtttctgg aacacgctgc agagcatcaa ccagacagac  
 300  
 cagatgcttg cccaccttca gtccttctcc tcagtgcctg agcatttcac gcttcctgac  
 360  
 agcaccaaga gcggagtgcc actcttctac atccctccag gctccaccac cccggtgctc  
 420  
 tccctccagc ccagtggttc tgactcatcc catgcccagt ttgctgccta ctggaagccc  
 480  
 agtgctgtcc atggatgcaa attcctggca gcgatggctg cacatgcac gcttggctg  
 540  
 aatcctggag catgacacac caatcccaa gcacttgac accccgggca gcaatgggag  
 600  
 ctactacgga gagaagacaa cgcgt  
 625

<210> 1484

<211> 184

<212> PRT

<213> Homo sapiens

<400> 1484

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Arg | Leu | Arg | Glu | Gly | Tyr | Ser | Val | Arg | Glu | Val | Thr | Leu | Ala | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Gly | Gly | Ser | Gln | Leu | Glu | Val | Lys | Leu | Val | Leu | Leu | Trp | Lys | His | Asn |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Met | Arg | Ile | Glu | Tyr | Val | Ala | Met | Ala | Ser | Trp | Pro | Leu | Glu | Pro | Glu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Gly | Pro | Arg | Val | Thr | Arg | Val | Glu | Val | Thr | Met | Glu | Gly | Gly | Tyr | Asp |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Ile | Leu | His | Asp | Val | Ser | Cys | Ala | Leu | Arg | Gln | Pro | Ile | Arg | Ser | Leu |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Tyr | Arg | Thr | His | Val | Ile | Arg | Arg | Phe | Trp | Asn | Thr | Leu | Gln | Ser | Ile |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Asn | Gln | Thr | Asp | Gln | Met | Leu | Ala | His | Leu | Gln | Ser | Phe | Ser | Ser | Val |
|     |     |     | 100 |     |     |     | 105 |     |     |     |     |     | 110 |     |     |
| Pro | Glu | His | Phe | Thr | Leu | Pro | Asp | Ser | Thr | Lys | Ser | Gly | Val | Pro | Leu |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Phe | Tyr | Ile | Pro | Pro | Gly | Ser | Thr | Thr | Pro | Val | Leu | Ser | Leu | Gln | Pro |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Ser | Gly | Ser | Asp | Ser | Ser | His | Ala | Gln | Phe | Ala | Ala | Tyr | Trp | Lys | Pro |
| 145 |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |     |
| Ser | Ala | Val | His | Gly | Cys | Lys | Phe | Leu | Ala | Ala | Met | Ala | Ala | His | Ala |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     |     | 175 |     |
| Ser | Pro | Gly | Ala | Asn | Pro | Gly | Ala |     |     |     |     |     |     |     |     |
|     |     |     | 180 |     |     |     |     |     |     |     |     |     |     |     |     |

<210> 1485

<211> 2058

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1485

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60  
ctgttccctgc cacagtcacg acccagacta tttatcattg gtgtcagaaa cgatattttt  
120  
gttggcgata ttactttctga atcaccgtct aaaatgtggc ataccagaac tttattgaat  
180  
gcctacagca atctgaaaga tgatgccaag tccaattggg tatgggtggga ccttcctatg  
240  
ccagcccaga gaaaatctgc tttcgccgat ttgattgaag aaaatcctag cagcgttaag  
300  
tggcataccc ggaaggaaac acagcagctc ttggatatga tgactgatgt taacttagct  
360  
aagggttgagg ctgcaaaaaa gctatcgatc gagtctaagg aaaatgttgt agggacaatt  
420  
tataaaagaa ctgcaccga tagctttgga gttaaagcgc agcgtgctga agtgcggttt  
480  
gatgatgttg ccggttgtct tcgcacccct ggaggggggt caagtcggca agtcataatg  
540  
gtcgttgata acgggactgt aaaaacgagg ttgatctcaa gtagagaaac tgcaaggctt  
600  
atgggggttac ccgacgaata catattgcc aaaaattata atgaggcgta tcacttaacg  
660  
ggtgatggtg ttgtagtgcc ggttgtatcc cacatagcca ctcatatttt tgaccagtg  
720  
atggagcgtg tgtttgagga tgcggcgga ctgcttaagc aaatcgcata gcacgtttt  
780  
ggcaggaaga tatgagcgtt attccgtgta aaaaggacct tcagctaaaa aaattgattg  
840  
aatcctatgc agaagccttg aaagttgagg ccataagct aggagagcat ggattaactg  
900  
aagctgaatt ttatgatagc ggccctcttc ggggggctat cgagcgaatt cgaggacagt  
960  
tctccgcgac catgcgggag aaaagaaatt tcgttaagca tgttttaaat tacatgcagg  
1020  
ataacgacta cattgctgat tgggagtcgg ctggtgaatc gaatcgccat gattatatgg  
1080  
taactctcaa ttctgggcgc aaagctgcta ttgagctgaa agggtgctt gatggcaata  
1140  
acactaacat ctttgatcgc cccctcagg cagaagaatt tgttatctgg agtgatgca  
1200  
caaactcctg tgctgacct cagcataatg tttggtctgg gcttcacacc agactaagtg  
1260  
ctgaaatcat ttcacgggag caaaggattg atggaatggt catttgggac tgggcttg  
1320  
gaacagtcgg aaggccatgc cccaaaatag caactgaacc tgagcgggct gtaacatttg  
1380  
ggcgttcaa attgccgcca ccatgtttgt atcttttacc ttcgacgatt ccaagccaa  
1440  
gaaacaaccc gtctccaaga gctcagcaga ttgaagacgt gcagctaate aaagcgtttc  
1500



acgattgttt tgggtgccgg tctgaagaag ttaatttcgt taactttgat gttgggttacc  
 1560  
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 1620  
 cggaaatgac ggcaataagg cggctctaat ttgtgcatgc ctatgctgca tgaatccgca  
 1680  
 tgatcgtttg aggatcgttt ttgctgaggc ccgccagttc tggtagggctt ttgcttatgt  
 1740  
 catgcacctg catgaaaacc gctacataaa gcgggcaggc gtggcgggga tacgagcgcg  
 1800  
 cgcaacgggg tgaaatggtg aatatcaggg gcaatctccg gcacgctggc ggcttgaatc  
 1860  
 gggtaggggtg agtgagaggg agcaataaag aagcgccccg cagaatgctg ctggggcgct  
 1920  
 gtgagaggtg gtcttggtgt cgcggtgcgg tgggtcagtc gtagcgattg tcttctgtca  
 1980  
 gccccagcgt gtacgggtca aagcggatca cttcttcgcc cagccagtca ttaagctccc  
 2040  
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 2058

<210> 1486

<211> 256

<212> PRT

<213> Homo sapiens

<400> 1486

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Cys | Ser | Ala | Phe | Asn | Asp | Ile | Gly | Tyr | His | Tyr | Gly | Ala | Met | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Val | Asp | Ala | Ala | Leu | Phe | Leu | Pro | Gln | Ser | Arg | Pro | Arg | Leu | Phe | Ile |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ile | Gly | Val | Arg | Asn | Asp | Ile | Phe | Val | Gly | Asp | Ile | Thr | Ser | Glu | Ser |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Pro | Ser | Lys | Met | Trp | His | Thr | Arg | Thr | Leu | Leu | Asn | Ala | Tyr | Ser | Asn |
|     | 50  |     |     |     | 55  |     |     |     |     |     | 60  |     |     |     |     |
| Leu | Lys | Asp | Asp | Ala | Lys | Ser | Asn | Trp | Val | Trp | Trp | Asp | Leu | Pro | Met |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Pro | Ala | Gln | Arg | Lys | Ser | Ala | Phe | Ala | Asp | Leu | Ile | Glu | Glu | Asn | Pro |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Ser | Ser | Val | Lys | Trp | His | Thr | Arg | Lys | Glu | Thr | Gln | Gln | Leu | Leu | Asp |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Met | Met | Thr | Asp | Val | Asn | Leu | Ala | Lys | Val | Glu | Ala | Ala | Lys | Lys | Leu |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Ser | Ile | Glu | Ser | Lys | Glu | Asn | Val | Val | Gly | Thr | Ile | Tyr | Lys | Arg | Thr |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Arg | Thr | Asp | Ser | Phe | Gly | Val | Lys | Ala | Gln | Arg | Ala | Glu | Val | Arg | Phe |
| 145 |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |     |
| Asp | Asp | Val | Ala | Gly | Cys | Leu | Arg | Thr | Pro | Gly | Gly | Gly | Ser | Ser | Arg |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Gln | Val | Ile | Met | Val | Val | Asp | Asn | Gly | Thr | Val | Lys | Thr | Arg | Leu | Ile |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Ser | Ser | Arg | Glu | Thr | Ala | Arg | Leu | Met | Gly | Leu | Pro | Asp | Glu | Tyr | Ile |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Leu | Pro | Lys | Asn | Tyr | Asn | Glu | Ala | Tyr | His | Leu | Thr | Gly | Asp | Gly | Val |

|   |     |     |
|---|-----|-----|
| 210   | 215 | 220 |
| Val Val Pro Val Val Ser His Ile Ala Thr His Ile Phe Asp Pro Val |     |     |
| 225   | 230 | 235 |
| Met Glu Arg Val Phe Glu Asp Ala Ala Gly Leu Leu Lys Gln Ile Ala |     | 240 |
|   | 245 | 250 |
|   |     | 255 |

<210> 1487  
 <211> 823  
 <212> DNA  
 <213> Homo sapiens

<400> 1487  
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 ccgagcaggt gacatttcag ctaaggctgg gaaggatgag gagaagtcag gaactccagg  
 120  
 catcagggaa tgctggggaa aaaaagcact ccaggcccag ggatcagcaa agcacaggat  
 180  
 gcctggggga acacacagcc tcagagcatt tgaggaacag aaaaggcaac gtgactaagg  
 240  
 ttcttggggc ggtgaggtca ggcagggagg tgggtgagag gtcattggggc cgcaggcaaa  
 300  
 cggccctccc tcccagtgcc ccacatgcag gccctggagc accaggagcg gggaggctcc  
 360  
 gtggtgtgtc ttcttgaag tggcctgcct ttgggagcat cagccctttc tcctggggac  
 420  
 tgggagaggc cggcagtgag ggaagaatgg ccctcggtcg tgcgtagaga atgtagggga  
 480  
 cacagggcct ctacaggacc cagatcctga tcttgtcaga tctgcacgcc cgtgggaggg  
 540  
 tgctggcggc agaaacgcgt tgccataagc cttctcccca ctgcaggcag gtgtggtcag  
 600  
 gggacctcct tggagaacaa ggtgggggaa tttggcagct ttctcagcat ggcgtccatc  
 660  
 cccctacat tcctggggca cccactgtag gccaggccct gtgccggatc tgatgataca  
 720  
 gtgatgacta agtcacagtc cctgcctctg agggcccat gatgtgccgg gacagccaag  
 780  
 caaccaata tggtaaaatc cagtgtcagg accnaggag aag  
 823

<210> 1488  
 <211> 149  
 <212> PRT  
 <213> Homo sapiens

<400> 1488  
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 1 5 10 15  
 Gln Val Thr Phe Gln Leu Arg Leu Gly Arg Met Arg Arg Ser Gln Glu  
 20 25 30  
 Leu Gln Ala Ser Gly Asn Ala Gly Glu Lys Lys His Ser Arg Pro Arg  
 35 40 45  
 Asp Gln Gln Ser Thr Gly Cys Leu Gly Glu His Thr Ala Ser Glu His

```

      50              55              60
Leu Arg Asn Arg Lys Gly Asn Val Thr Lys Leu Pro Gly Ala Val Arg
65              70              75              80
Ser Gly Arg Glu Val Gly Ala Arg Ser Trp Gly Arg Arg Gln Thr Ala
      85              90              95
Leu Pro Pro Ser Ala Pro His Ala Gly Pro Gly Ala Pro Gly Ala Gly
      100             105             110
Arg Leu Arg Gly Val Ser Ser Cys Lys Trp Pro Ala Phe Gly Ser Ile
      115             120             125
Ser Pro Phe Ser Trp Gly Leu Gly Glu Ala Gly Ser Glu Gly Arg Met
      130             135             140
Ala Leu Gly Arg Ala
145

```

<210> 1489  
 <211> 342  
 <212> DNA  
 <213> Homo sapiens

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<400> 1489
nnccagttca ccgtcaagct ggccgcgggcc ggcgaaacaca atgtgcgcaa tgcgctggcc
60
gcgattgcct gcgccgtggg tgccggcatc aaccaggacg ccacgtgctg cgccctcgaa
120
gccttcgccc cggtcggcgg acgtttgcag cgcaagcagg ccgccagcgg cgcgcccgtc
180
attgacgaca cccacaaccc caatcccaat tcaatgcgcc cggcgatcga cgtgctggcc
240
cgcgtaccgg cgccgcgcac cctggtggtg ggcgacatgg gcgaagtcgg cgcacagggg
300
aaagaatttc acgaagaaat cggggcttac gcacacacgc gt
342

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<210> 1490  
 <211> 114  
 <212> PRT  
 <213> Homo sapiens

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<400> 1490
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Asn Ala Leu Ala Ala Ile Ala Cys Ala Val Gly Ala Gly Ile Asn Gln
      20              25              30
Asp Ala Ile Val Arg Gly Leu Glu Ala Phe Ala Pro Val Gly Gly Arg
      35              40              45
Leu Gln Arg Lys Gln Ala Ala Ser Gly Ala Pro Val Ile Asp Asp Thr
      50              55              60
His Asn Pro Asn Pro Asn Ser Met Arg Pro Ala Ile Asp Val Leu Ala
65              70              75              80
Arg Val Pro Ala Pro Arg Ile Leu Val Val Gly Asp Met Gly Glu Val
      85              90              95
Gly Ala Gln Gly Lys Glu Phe His Glu Glu Ile Gly Ala Tyr Ala His
      100             105             110
Thr Arg

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<210> 1491  
 <211> 333  
 <212> DNA  
 <213> Homo sapiens

<400> 1491  
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 60  
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 120  
 tggggggtcag gtcccactcc caaaggagta gccatcaccc acgagtcggc ggtcaatacg  
 180  
 attgtcgatg tcaacgaacg cctcgggggtg actccgaccg accggatatt ggggatttca  
 240  
 gagctaaact tcgatctatc ggtatacgac atcttcggga tgttcgcgcg ggggtgctacc  
 300  
 ttggtgttgc catctccagc agacaaacgt gat  
 333

<210> 1492  
 <211> 91  
 <212> PRT  
 <213> Homo sapiens

<400> 1492  
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 Val Ser Thr Thr Trp Gly Ser Gly Pro Thr Pro Lys Gly Val Ala Ile  
 20 25 30  
 Thr His Glu Ser Ala Val Asn Thr Ile Val Asp Val Asn Glu Arg Leu  
 35 40 45  
 Gly Val Thr Pro Thr Asp Arg Ile Leu Gly Ile Ser Glu Leu Asn Phe  
 50 55 60  
 Asp Leu Ser Val Tyr Asp Ile Phe Gly Met Phe Ala Arg Gly Ala Thr  
 65 70 75 80  
 Leu Val Leu Pro Ser Pro Ala Asp Lys Arg Asp  
 85 90

<210> 1493  
 <211> 1316  
 <212> DNA  
 <213> Homo sapiens

<400> 1493  
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 cccttgcccc cgaagccagg ccctgggtca ccctcccacc cgggtgccct tgacttggat  
 120  
 ggtgtttccc ggcagcagaa cgcggtgggc agggagaagg agctgctcag cagccagagg  
 180  
 gacggggcgt ttgaaggccg cccgggtgcc gacggtgacg ccaagcagag atcaccaaag  
 240

atgaggcaga gacccccctcc tcgccgggac atgaccattc ctgaggcct caacctgccg  
 300  
 aagccgcccc tccccccca agtggaggaa gagtattaca ccatcgccga attccagaca  
 360  
 accatcccag acggcatcag cttccaggca ggcctgaagg tcgaggatgat cgagaaaaac  
 420  
 ttgagtggct ggtggtacat tcagattgaa gataaggaag ggtgggcccc ggccaccttc  
 480  
 attgacaagt acaagaagac gagcaacgcg tcgagaccca actttctggc tcccctgccc  
 540  
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 600  
 gaagccacgg gcccctcccc gcccctgcct gacgcaccgc atggtgtcat ggactcgggg  
 660  
 ttgccatggt ctaaagactg gaagggcagt aaggatgtcc tgaggaaggc atcttcagac  
 720  
 atgtctgcgt cagcaggcta cgaggagatc tcagaccccc acatggagga gaagcccagc  
 780  
 ctccctccgc ggaaagaatc catcatcaag tcggaggggg agctgctgga gcgggagcgg  
 840  
 gagcggcaga ggacggagca gctccggggc cccactccca agcctccggg cgtgattttg  
 900  
 ccgatgatgc cagccaaaca catccctcca gcccgggaca gcaggaggcc agagcccaaa  
 960  
 cctgacaaaa gcagactggt ccagctgaaa aatgacatgg ggctggagtg tggccacaag  
 1020  
 gtcttgccca aggaagtga gaagcccaac ctccggccca tctccaaatc caaaactgac  
 1080  
 ctgccagagg agaagccaga tgccactccc cagaatccct tcttgaagtc cagacctcag  
 1140  
 gttaggccaa aaccagctcc tcccccaaa acggagccac ctcagggcga agaccaagtc  
 1200  
 gacatctgca acctcaggag taagctcagg cctgccaagt cccaagacaa gtccttggtg  
 1260  
 gatggggagg gccccaggc agtagggggc caagacgtgg ccttcagccg aagctt  
 1316

&lt;210&gt; 1494

&lt;211&gt; 438

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1494

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Tyr | Gln | Gly | Lys | Glu | Gly | Trp | Ala | Pro | Ala | Ser | Tyr | Leu | Lys | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Asn | Ser | Gly | Glu | Pro | Leu | Pro | Pro | Lys | Pro | Gly | Pro | Gly | Ser | Pro | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| His | Pro | Gly | Ala | Leu | Asp | Leu | Asp | Gly | Val | Ser | Arg | Gln | Gln | Asn | Ala |
|     |     |     | 35  |     |     |     |     | 40  |     |     |     | 45  |     |     |     |
| Val | Gly | Arg | Glu | Lys | Glu | Leu | Leu | Ser | Ser | Gln | Arg | Asp | Gly | Arg | Phe |
|     |     |     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |
| Glu | Gly | Arg | Pro | Val | Pro | Asp | Gly | Asp | Ala | Lys | Gln | Arg | Ser | Pro | Lys |
|     |     |     |     |     |     | 70  |     |     |     | 75  |     |     |     | 80  |     |
| Met | Arg | Gln | Arg | Pro | Pro | Pro | Arg | Arg | Asp | Met | Thr | Ile | Pro | Arg | Gly |

```

      85      90      95
Leu Asn Leu Pro Lys Pro Pro Ile Pro Pro Gln Val Glu Glu Tyr
      100      105      110
Tyr Thr Ile Ala Glu Phe Gln Thr Thr Ile Pro Asp Gly Ile Ser Phe
      115      120      125
Gln Ala Gly Leu Lys Val Glu Val Ile Glu Lys Asn Leu Ser Gly Trp
      130      135      140
Trp Tyr Ile Gln Ile Glu Asp Lys Glu Gly Trp Ala Pro Ala Thr Phe
      145      150      155      160
Ile Asp Lys Tyr Lys Lys Thr Ser Asn Ala Ser Arg Pro Asn Phe Leu
      165      170      175
Ala Pro Leu Pro His Glu Val Thr Gln Leu Arg Leu Gly Glu Ala Ala
      180      185      190
Ala Leu Glu Asn Asn Thr Gly Ser Glu Ala Thr Gly Pro Ser Arg Pro
      195      200      205
Leu Pro Asp Ala Pro His Gly Val Met Asp Ser Gly Leu Pro Trp Ser
      210      215      220
Lys Asp Trp Lys Gly Ser Lys Asp Val Leu Arg Lys Ala Ser Ser Asp
      225      230      235      240
Met Ser Ala Ser Ala Gly Tyr Glu Glu Ile Ser Asp Pro Asp Met Glu
      245      250      255
Glu Lys Pro Ser Leu Pro Pro Arg Lys Glu Ser Ile Ile Lys Ser Glu
      260      265      270
Gly Glu Leu Leu Glu Arg Glu Arg Glu Arg Gln Arg Thr Glu Gln Leu
      275      280      285
Arg Gly Pro Thr Pro Lys Pro Pro Gly Val Ile Leu Pro Met Met Pro
      290      295      300
Ala Lys His Ile Pro Pro Ala Arg Asp Ser Arg Arg Pro Glu Pro Lys
      305      310      315      320
Pro Asp Lys Ser Arg Leu Phe Gln Leu Lys Asn Asp Met Gly Leu Glu
      325      330      335
Cys Gly His Lys Val Leu Ala Lys Glu Val Lys Lys Pro Asn Leu Arg
      340      345      350
Pro Ile Ser Lys Ser Lys Thr Asp Leu Pro Glu Glu Lys Pro Asp Ala
      355      360      365
Thr Pro Gln Asn Pro Phe Leu Lys Ser Arg Pro Gln Val Arg Pro Lys
      370      375      380
Pro Ala Pro Ser Pro Lys Thr Glu Pro Pro Gln Gly Glu Asp Gln Val
      385      390      395      400
Asp Ile Cys Asn Leu Arg Ser Lys Leu Arg Pro Ala Lys Ser Gln Asp
      405      410      415
Lys Ser Leu Leu Asp Gly Glu Gly Pro Gln Ala Val Gly Gly Gln Asp
      420      425      430
Val Ala Phe Ser Arg Ser
      435

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&lt;210&gt; 1495

&lt;211&gt; 329

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1495

```

agatctctgt cccgtagagg tgccacctca tcttccatga gagctgtgct ttgctttctt
60

```

ctggaggctg caaggaggat ggccccatc acggcggacc tacatgctgg gagtccggga  
 120  
 gagggcaggg cgcggacatg gggcatgtgg cgatgtgttt caccaccac tcccgctga  
 180  
 agtgccactg tgagcccaac ccacggtgcc aggctgggct gcactccagg ctctgcagc  
 240  
 agaccacct cctcagcctc ctccccctga aggctgggca tggcctggac aaagggtgtc  
 300  
 ctctctgct gtgccatgt gacgtggca  
 329

<210> 1496  
 <211> 105  
 <212> PRT  
 <213> Homo sapiens

<400> 1496  
 Met Ala Gln Gln Arg Arg Thr Pro Phe Val Gln Ala Met Pro Ser Leu  
 1 5 10 15  
 Gln Gly Lys Glu Ala Glu Glu Val Gly Leu Leu Gln Glu Pro Gly Val  
 20 25 30  
 Gln Pro Ser Leu Ala Pro Trp Val Gly Leu Thr Val Ala Leu Gln Ala  
 35 40 45  
 Gly Val Gly Gly Glu Thr His Arg His Met Pro His Val Arg Gly Leu  
 50 55 60  
 Pro Ser Pro Gly Leu Pro Ala Cys Arg Ser Ala Val Met Gly Ala Ile  
 65 70 75 80  
 Leu Leu Ala Ala Ser Arg Arg Lys Gln Ser Thr Ala Leu Met Glu Asp  
 85 90 95  
 Glu Val Ala Pro Leu Arg Asp Arg Asp  
 100 105

<210> 1497  
 <211> 345  
 <212> DNA  
 <213> Homo sapiens

<400> 1497  
 naacttcttg cactcactca ggcgacaggt tggcggccga cttggaagcc gctgcagcac  
 60  
 ttgacgcggg gcgatctcga agcggttcggt cttggcctga cggtcgatgg ctgcggcgtg  
 120  
 ccgttgatcg cgcgaatgcg acgggtgggg cagggcgtgc ggccgacacc accgcaagaa  
 180  
 cgcaactcac ggcagatgaa tctgttttga aacgcaagga agggtaatga caggcaccga  
 240  
 caagaagcgg atccccgagc tgctgcgtgt tgagctcact gaacttaccg gcccgatcga  
 300  
 gcagccttac gcgcccgatg cagctcattc tttcgggcca cgcgt  
 345

<210> 1498  
 <211> 104  
 <212> PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1498

```

Met Thr Cys Ile Gly Arg Val Arg Leu Leu Asp Arg Ala Gly Lys Phe
 1           5           10           15
Ser Glu Leu Asn Thr Gln Gln Leu Arg Asp Pro Leu Leu Val Gly Ala
      20           25           30
Cys His Tyr Pro Ser Leu Arg Phe Lys Thr Asp Ser Ser Ala Val Ser
      35           40           45
Cys Val Leu Ala Val Val Ser Ala Ala Arg Pro Ala Pro Pro Val Ala
      50           55           60
Phe Ala Arg Ser Thr Ala Arg Arg Ser His Arg Pro Ser Gly Gln Asp
65           70           75           80
Arg Thr Leu Arg Asp Arg Pro Ala Ser Ser Ala Ala Ala Ala Ser Lys
      85           90           95
Ser Ala Ala Asn Arg Ala Pro Glu
      100

```

&lt;210&gt; 1499

&lt;211&gt; 402

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1499

```

aaatatattc tgccagagtt tgaacacgac accatgctct ggcatttggg catgtcgggg
60
agtttccgctc tatgcgagag caatgaagaa ttacgcaaac atgaccatct aatcattcag
120
tttgaagata tcgaactgcg ttatcatgat cctcgccggt ttggttgcac tctttggctg
180
gatgcacaat cacaagcaa attaatagat acgctggggc cagaaccctt aagcgagAAC
240
tttaatgcgg agtattttatt tgaaaaattg aagaataaaa aggttggcac caaagttgca
300
attatggata accatgtggt ggtgggcgta ggcaatattt atgcgaccga aagtctgttt
360
aatctgggga ttcattccagc acaaccggcc tcgactttaa gc
402

```

&lt;210&gt; 1500

&lt;211&gt; 134

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1500

```

Lys Tyr Ile Leu Pro Glu Phe Glu His Asp Thr Met Leu Trp His Leu
 1           5           10           15
Gly Met Ser Gly Ser Phe Arg Leu Cys Glu Ser Asn Glu Glu Leu Arg
      20           25           30
Lys His Asp His Leu Ile Ile Gln Phe Glu Asp Ile Glu Leu Arg Tyr
      35           40           45
His Asp Pro Arg Arg Phe Gly Cys Ile Leu Trp Leu Asp Ala Gln Ser
      50           55           60
Gln Ser Lys Leu Ile Asp Thr Leu Gly Pro Glu Pro Leu Ser Glu Asn

```



```

65              70              75              80
Phe Asn Ala Glu Tyr Leu Phe Glu Lys Leu Lys Asn Lys Lys Val Gly
      85              90              95
Thr Lys Val Ala Ile Met Asp Asn His Val Val Val Gly Val Gly Asn
      100              105              110
Ile Tyr Ala Thr Glu Ser Leu Phe Asn Leu Gly Ile His Pro Ala Gln
      115              120              125
Pro Ala Ser Thr Leu Ser
      130

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<210> 1501
<211> 362
<212> DNA
<213> Homo sapiens

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```

<400> 1501
nnacgcgtgc atgctgcagg catcatccat cgcgatctga agccccaaaa catcttcctg
60
gtgccgagcg cgcgcgagcg cgacttcgtg aagatcttcg acttcggcgc atgccagatg
120
gtcacaccga aggtatcgaa cggcgtgccc gagctgaaga cgagcgcggg aaatctcttc
180
ggcacgggtgc cgtacatggc gccggagtgc ttcgaggacg gctcgcaccg gctggatgcg
240
cgcgcgggaca tctactccac gggcatcatc atgtaccgct gcgtgacggg gacgctcccc
300
ttcaaggcga acaccgtctt cgagatgctc atccatctgc gcgagggccg cccatcaagc
360
tt
362

```

```

<210> 1502
<211> 120
<212> PRT
<213> Homo sapiens

```

```

<400> 1502
Xaa Arg Val His Ala Ala Gly Ile Ile His Arg Asp Leu Lys Pro Gln
1              5              10              15
Asn Ile Phe Leu Val Pro Ser Ala Arg Glu Arg Asp Phe Val Lys Ile
      20              25              30
Phe Asp Phe Gly Ala Cys Gln Met Val Thr Pro Lys Val Ser Asn Gly
      35              40              45
Val Pro Glu Leu Lys Thr Ser Ala Gly Asn Leu Phe Gly Thr Val Pro
      50              55              60
Tyr Met Ala Pro Glu Cys Phe Glu Asp Gly Ser His Arg Leu Asp Ala
65              70              75              80
Arg Ala Asp Ile Tyr Ser Thr Gly Ile Ile Met Tyr Arg Cys Val Thr
      85              90              95
Gly Thr Leu Pro Phe Lys Ala Asn Thr Val Phe Glu Met Leu Ile His
      100              105              110
Leu Arg Glu Gly Arg Pro Ser Ser
      115              120

```

<210> 1503  
 <211> 623  
 <212> DNA  
 <213> Homo sapiens

<400> 1503  
 gccggcgtga ggcagagaaa cgtcctcgcc ctgtcattcc accctgaaga gactgacgac  
 60  
 gaccgggtac accgcacctg gttgcgccag gtgtctgagg aggtctgaca gttaccgcaa  
 120  
 gggctcatga cgacccctcc tgaacactgt tcaaagggcg acggcttacc attcctcgct  
 180  
 gtgagtcctg aacagcagct tctcgaatat gaccgacgtc atgtctggca cccctacgcc  
 240  
 ccgacgatcg gggcagaccc aatgcttgca gtgacggctg ccaacggagt ctggctgcag  
 300  
 ctgcatgatg gggaaacaccg ccacgaggtc atcgatgcga tggcctcgtg gtggtgccag  
 360  
 attcacgggtt accgaaaccc ggtcctcgac gaggccctca accgtcaaag ctcccagttc  
 420  
 agtcacgtca tgtttgccgg actcacccat aaggccgcgg ttgacgccgt catatcccta  
 480  
 gtgcgcctgg ccccgggggc cctcgaccgg atcttctctg ctgattccgg gtctgtcggc  
 540  
 gtcgagggtga gtctcaaatt ggctcgtcag gtgcaaatcg ctcgcaccgc agcgcgcggc  
 600  
 ggcactttga cgaggacacg cgt  
 623

<210> 1504  
 <211> 165  
 <212> PRT  
 <213> Homo sapiens

<400> 1504  
 Met Thr Thr Pro Pro Glu His Cys Ser Lys Gly Asp Gly Leu Pro Phe  
 1 5 10 15  
 Leu Ala Val Ser Pro Glu Gln Gln Leu Leu Glu Tyr Asp Arg Arg His  
 20 25 30  
 Val Trp His Pro Tyr Ala Pro Thr Ile Gly Ala Asp Pro Met Leu Ala  
 35 40 45  
 Val Thr Ala Ala Asn Gly Val Trp Leu Gln Leu His Asp Gly Glu His  
 50 55 60  
 Arg His Glu Val Ile Asp Ala Met Ala Ser Trp Trp Cys Gln Ile His  
 65 70 75 80  
 Gly Tyr Arg Asn Pro Val Leu Asp Glu Ala Leu Asn Arg Gln Ser Ser  
 85 90 95  
 Gln Phe Ser His Val Met Phe Gly Gly Leu Thr His Lys Ala Ala Val  
 100 105 110  
 Asp Ala Val Ile Ser Leu Val Arg Leu Ala Pro Gly Pro Leu Asp Arg  
 115 120 125  
 Ile Phe Leu Ala Asp Ser Gly Ser Val Gly Val Glu Val Ser Leu Lys  
 130 135 140  
 Leu Ala Arg Gln Val Gln Ile Ala Arg Thr Ala Ala Arg Gly Gly Thr

145                                      150                                      155                                      160  
 Leu Thr Arg Thr Arg  
    165

<210> 1505  
 <211> 556  
 <212> DNA  
 <213> Homo sapiens

<400> 1505  
 nngcgcgcgcg gtcctcaac accaccctga cttcgaaata tctggagaat gtctacgttg  
 60  
 gtttcaatcg gtttgccgaa cagatggcca ggatggccgg cgcctcggcg aaactggacg  
 120  
 acggggggccc cgaaactcgc tgacggcact aaaccttctt cccccggcgc aaccaccttg  
 180  
 gcttcngca tgacgaagct cagcggggga gctcagcggg tgtcagctaa cggcggcaag  
 240  
 ctacccgacg gtgtctccca gctctccgga gggctcacia ccttgtctca caagggccag  
 300  
 cagctcagcc aaggggcccga tgggctggcc agcgggggtg cgacctacac cgatggcacg  
 360  
 gggaaggctc tcgacggcat cgggcagctg tcggctgggt tgacgacgat ggatgagaag  
 420  
 atcgctgcgg ctaccgggaa aatcgatccc tcccagctcg aaaaactcgc cgggtggggcc  
 480  
 ggacagcttg ctgatggcat cgaccagttc accggcaatc tgggtgggtta tcgtactgag  
 540  
 atccgccagt acgcgt  
 556

<210> 1506  
 <211> 169  
 <212> PRT  
 <213> Homo sapiens

<400> 1506  
 Met Ser Thr Leu Val Ser Ile Gly Leu Pro Asn Arg Trp Pro Gly Trp  
 1                                      5                                      10                                      15  
 Pro Ala Pro Arg Arg Asn Trp Thr Thr Gly Ala Pro Lys Leu Ala Asp  
    20                                      25                                      30  
 Gly Thr Lys Pro Ser Ser Pro Gly Ala Thr Thr Leu Ala Ser Xaa Met  
    35                                      40                                      45  
 Thr Lys Leu Ser Gly Gly Ala Gln Arg Leu Ser Ala Asn Gly Gly Lys  
    50                                      55                                      60  
 Leu Thr Asp Gly Val Ser Gln Leu Ser Gly Gly Leu Thr Thr Leu Ser  
 65                                      70                                      75                                      80  
 His Lys Gly Gln Gln Leu Ser Gln Gly Ala Asp Gly Leu Ala Ser Gly  
    85                                      90                                      95  
 Val Ala Thr Tyr Thr Asp Gly Thr Gly Lys Val Val Asp Gly Ile Gly  
    100                                      105                                      110  
 Gln Leu Ser Ala Gly Leu Thr Thr Met Asp Glu Lys Ile Ala Ala Ala  
    115                                      120                                      125  
 Thr Gly Lys Ile Asp Pro Ser Gln Leu Asp Lys Leu Ala Gly Gly Ala

|   |     |     |
|---|-----|-----|
| 130   | 135 | 140 |
| Gly Gln Leu Ala Asp Gly Ile Asp Gln Phe Thr Gly Asn Leu Val Gly |     |     |
| 145   | 150 | 155 |
| Tyr Arg Thr Glu Ile Arg Gln Tyr Ala                             |     | 160 |
| 165   |     |     |

<210> 1507  
 <211> 667  
 <212> DNA  
 <213> Homo sapiens

<400> 1507  
 agatctctta agatgtgctc attatcatga gaacagcgtg gaggaaacca cccccaggat  
 60  
 ccagttacct ccacttgctc tgcccttggc acgtggggct tatggggatt acaattcaag  
 120  
 gtgagacttg ggtggggaca cagtggaaca tgaagtgtgc cacgctgggt ggatgacgcc  
 180  
 ctccctcccc cgccaccgag agctgcaggc cacatgattc cttttgggta gcactcggga  
 240  
 aagggcagaa tgtacaggaa cagagtgaga ttcgcagggc ctggggctga gggaggggac  
 300  
 gcactagagg aaggcaaagg ggagcctcct ggggtgtgggg agcactttct gtcttggttt  
 360  
 tggtggtggc tgcacagtgg cccacacccg tcagagctca cctgcctgca cccaggccct  
 420  
 ccgtgcaccc tggcagccca gatgactgca ccagcccagg ggaggtggag gaatgccaca  
 480  
 cgaccggta cctggggacc gggggtcctc ggtgatcatc ccgagctcca agacagaagc  
 540  
 tggactacag ccgtgctgag tggaggggtt tgggtggctgg gtgcccgcct cctattgctc  
 600  
 ctgcagactc tggggctctg ggcgccccca gtggggcaat gtgggctgct gcaggggaact  
 660  
 cacgcgt  
 667

<210> 1508  
 <211> 139  
 <212> PRT  
 <213> Homo sapiens

<400> 1508  
 Met Tyr Arg Asn Arg Val Arg Phe Ala Gly Pro Gly Ala Glu Gly Gly  
 1 5 10 15  
 Asp Ala Leu Glu Glu Gly Lys Gly Glu Pro Pro Gly Cys Gly Glu His  
 20 25 30  
 Phe Leu Ser Trp Phe Trp Trp Trp Leu His Ser Gly Pro His Pro Ser  
 35 40 45  
 Glu Leu Thr Cys Leu His Pro Gly Pro Pro Cys Thr Leu Ala Ala Gln  
 50 55 60  
 Met Thr Ala Pro Ala Gln Gly Arg Trp Arg Asn Ala Thr Arg Thr Gly  
 65 70 75 80  
 Thr Trp Gly Pro Gly Val Leu Gly Asp His Pro Glu Leu Gln Asp Arg

85 90 95  
 Ser Trp Thr Thr Ala Val Leu Ser Gly Gly Val Trp Trp Leu Gly Ala  
 100 105 110  
 Arg Leu Leu Leu Leu Gln Thr Leu Gly Ser Arg Ala Pro Pro Val  
 115 120 125  
 Gly Gln Cys Gly Leu Leu Gln Gly Thr His Ala  
 130 135

<210> 1509  
 <211> 463  
 <212> DNA  
 <213> Homo sapiens

<400> 1509  
 tgatcagagt ggctgagcaa cttgctcaag atcacagttt cagaagtacg ctctaagctg  
 60  
 ggtctggctg actccaaagt tgtggctttt gttggttttc ttgttctgtc gcgttttaga  
 120  
 aagggttagg aaccgagcac tgggcgttgg gcttactctc ctctatggg gacctgggag  
 180  
 tgggtcccaa ggcgtctctc tcccagcacc tcagggtcct cactggtaaa ggagggagtg  
 240  
 attggaatgt cgccaaagtt acttggctct ggaattctgt ggctattcac gtggactctg  
 300  
 gatggcggtc accaagtaga agaggggccc tgggatagag agaagtctcc tctcctgtc  
 360  
 ctgatttccc aggcctctcc ctctcctggc cctccctcct ttcttccact tccccggatt  
 420  
 cccttcgagt ttggttgcaa ctttaatttt nngttccgat tca  
 463

<210> 1510  
 <211> 99  
 <212> PRT  
 <213> Homo sapiens

<400> 1510  
 Met Val Thr Trp Glu Trp Cys Pro Arg Arg Ser Leu Pro Ser Thr Ser  
 1 5 10 15  
 Gly Ser Ser Leu Val Lys Glu Gly Val Ile Gly Met Ser Pro Lys Leu  
 20 25 30  
 Leu Gly Ser Gly Ile Leu Trp Leu Phe Thr Trp Thr Leu Asp Gly Gly  
 35 40 45  
 His Gln Val Glu Glu Gly Pro Trp Asp Arg Glu Lys Ser Pro Leu Leu  
 50 55 60  
 Leu Leu Ile Ser Gln Ala Ser Pro Ser Pro Gly Pro Pro Ser Phe Leu  
 65 70 75 80  
 Pro Leu Pro Arg Ile Pro Phe Glu Phe Gly Cys Asn Phe Asn Phe Xaa  
 85 90 95  
 Phe Arg Phe

<210> 1511  
 <211> 633

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1511

gccggcaccg gcgtaaggc catggcgctg ggcccgggat gggtaacac cgaattccac  
 60  
 tcacgcgcca acgtcaccgg caaccatctg cgggactttt tctggatcga cgccgaagtt  
 120  
 ctggtacgcg aggctctcaa cgaccttgac catgacaagg tagtatccat tcctaccccg  
 180  
 ctctggaagt tcttcacgc agtggccaca catacccccac gttccgctat gagattcctg  
 240  
 tcacgaactc tgtcctcgtc tcgagacaag gacgaccatc ctcgacacac tccggggaggc  
 300  
 gaggcctgag atggccagcg tcaaaccac taaggaccgg ggccggtaca ccaatgatct  
 360  
 gtccgcccgcg acgcggcagg cagcgaacat gcttctgctg cgtcctttgg tgtggaaagt  
 420  
 cgtcaaagtg agcgtccacg gagccgacaa cctcgacggg ctcgacggtg ccttacgctg  
 480  
 ccgtcgctaa ccattcctcc cacctcgacg cgccgctcgt ttttggggcc cttcccaagc  
 540  
 ggctgtcaaa gtacctagct accggggccg ctgctgacta tttcttcacc gtctggtgga  
 600  
 aggccatcgc tccggtgctc ttcttcaacg cgt  
 633

&lt;210&gt; 1512

&lt;211&gt; 102

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1512

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Thr | Gly | Val | Lys | Ala | Met | Ala | Leu | Gly | Pro | Gly | Trp | Val | His |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Thr | Glu | Phe | His | Ser | Arg | Ala | Asn | Val | Thr | Gly | Asn | His | Leu | Pro | Asp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Phe | Phe | Trp | Ile | Asp | Ala | Glu | Val | Leu | Val | Arg | Glu | Ala | Leu | Asn | Asp |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Leu | Asp | His | Asp | Lys | Val | Val | Ser | Ile | Pro | Thr | Pro | Leu | Trp | Lys | Phe |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Phe | Ile | Ala | Val | Ala | Thr | His | Thr | Pro | Arg | Ser | Ala | Met | Arg | Phe | Leu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Ser | Arg | Thr | Leu | Ser | Ser | Ser | Arg | Asp | Lys | Asp | Asp | His | Pro | Arg | His |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Thr | Pro | Gly | Gly | Glu | Ala |     |     |     |     |     |     |     |     |     |     |
|     |     |     | 100 |     |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 1513

&lt;211&gt; 401

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1513

acgcgtgaag ggggtggaatt tcaccacaga ggggacgccg gggttcctgt tcagaaatat  
 60  
 ttggctcgtcc aatctcgtaa tgcccttctg aatgacttgc tgggcctgcc tcctgacacg  
 120  
 gctgtttcgc aggaaccgcc actcccgtc cttgeggatc tgactctcca ggtcgtgctc  
 180  
 ttctgggatc ttcattgacgg gctgggtaaa atagccgggc gctccagtcg cagaaccccg  
 240  
 tctgcaccgt ggcggagatg aaacttttgt gtccagcagc atcgtccgcg tcgtccgcag  
 300  
 tctgtctcgg gcccttgctg aacatcttcc gtgtccgggg gaactggtgg gagtgagggg  
 360  
 tgtactgcgc ccagcgggg cctgtggtgc ccggccggcc g  
 401

<210> 1514  
 <211> 108  
 <212> PRT  
 <213> Homo sapiens

<400> 1514  
 Met Phe Asp Lys Gly Pro Glu Gln Thr Ala Asp Asp Ala Asp Asp Ala  
 1 5 10 15  
 Ala Gly His Lys Ser Phe Ile Ser Ala Thr Val Gln Thr Gly Phe Cys  
 20 25 30  
 Asp Trp Ser Ala Arg Leu Phe Tyr Pro Ala Arg His Glu Asp Pro Arg  
 35 40 45  
 Arg Ala Arg Pro Gly Glu Ser Asp Pro Gln Gly Ala Gly Val Ala Val  
 50 55 60  
 Pro Ala Lys Gln Pro Cys Gln Glu Ala Gly Pro Ala Ser His Ser Glu  
 65 70 75 80  
 Gly His Tyr Glu Ile Gly Arg Pro Asn Ile Ser Glu Gln Glu Pro Arg  
 85 90 95  
 Arg Pro Leu Cys Gly Glu Ile Pro Pro Leu His Ala  
 100 105

<210> 1515  
 <211> 720  
 <212> DNA  
 <213> Homo sapiens

<400> 1515  
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 120  
 aactacgagc ctgacctgac cgacgatgcg acgtcgggcc cgctcgccgt cgtcattgac  
 180  
 gateccggcc cgcctacgcc tattgcgcgc cgccacgaca tcagcgaatc gggcatctat  
 240  
 gagacccatg tcaaagggtt aaccgcctt caccacctcg ttcttgagca tcttcgcagc  
 300  
 acctatgccg ggcttgcccta tccggctgtt atcgaacacc tcaagtcaat cggagtaaca  
 360

gccatcgaac tactaccggt ccagcagttc gtctccgaac cattcatcgt tgggcgcggc  
 420  
 ttatccgatt actgggggtta caacaccctg ggggttctttg cgccgcatgc tgcctactgc  
 480  
 tccgtcggct cgatgggaac ccaggtgctg gagttcaagg acatggtgac gtctttccac  
 540  
 gaagccggca tcgaggtttt cctcgatgtc gtctacaacc aactggtga gggcggccat  
 600  
 gaaggaccga ctctgtcttt ccgcggcatc gatcacgagt cttattaccg cctcaccaac  
 660  
 gatcaccgca atgactatga cgtcaccggt tgtggcaatt ctgtcgacac ctcccatccg  
 720

<210> 1516  
 <211> 240  
 <212> PRT  
 <213> Homo sapiens

<400> 1516  
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 Asp Pro Tyr Ala Arg Ala Ile Thr Ala Gly Val Asp Tyr His Gly Pro  
 20 25 30  
 Ile Met Asp His Thr Pro Glu Ser Asn Tyr Glu Pro Asp Leu Thr Asp  
 35 40 45  
 Asp Ala Thr Ser Val Pro Leu Ala Val Val Ile Asp Asp Pro Gly Pro  
 50 55 60  
 Pro Thr Pro Ile Ala Arg Arg His Asp Ile Ser Glu Ser Gly Ile Tyr  
 65 70 75 80  
 Glu Thr His Val Lys Gly Leu Thr Arg Leu His Pro Leu Val Pro Glu  
 85 90 95  
 His Leu Arg Ser Thr Tyr Ala Gly Leu Ala Tyr Pro Ala Val Ile Glu  
 100 105 110  
 His Leu Lys Ser Ile Gly Val Thr Ala Ile Glu Leu Leu Pro Val Gln  
 115 120 125  
 Gln Phe Val Ser Glu Pro Phe Ile Val Gly Arg Gly Leu Ser Asp Tyr  
 130 135 140  
 Trp Gly Tyr Asn Thr Leu Gly Phe Phe Ala Pro His Ala Ala Tyr Cys  
 145 150 155 160  
 Ser Val Gly Ser Met Gly Thr Gln Val Arg Glu Phe Lys Asp Met Val  
 165 170 175  
 Thr Ser Phe His Glu Ala Gly Ile Glu Val Phe Leu Asp Val Val Tyr  
 180 185 190  
 Asn His Thr Gly Glu Gly Gly His Glu Gly Pro Thr Leu Ser Phe Arg  
 195 200 205  
 Gly Ile Asp His Glu Ser Tyr Tyr Arg Leu Thr Asn Asp His Arg Asn  
 210 215 220  
 Asp Tyr Asp Val Thr Gly Cys Gly Asn Ser Val Asp Thr Ser His Pro  
 225 230 235 240

<210> 1517  
 <211> 497  
 <212> DNA  
 <213> Homo sapiens



&lt;400&gt; 1517

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 120  
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 180  
 gctgctggca tgggtgttga catcgtgcag cactgggaag tcttccagaa ggtgacagag  
 240  
 gtcttcatcc tagtgctgc gctgctgggg ctcaaaggga acctggaaat gaccctggca  
 300  
 tcaaggcttt cactgcagc caacattgga cacatggaca cacccaagga gctctggcgg  
 360  
 atgatcactg ggaacatggc cctcatccag gtgcaggccc cgggtggtggg cttcctggcg  
 420  
 tccatgcag cgcgtctctt tggctggatc cctgatggcc acttcagtat tccgcacgcc  
 480  
 ttcctgctct gtggtag  
 497

&lt;210&gt; 1518

&lt;211&gt; 165

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1518

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Arg | Val | Lys | Gly | Val | Arg | Glu | Glu | Asp | Ala | Leu | Leu | Glu | Asn | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ser | Gln | Ser | Asn | Glu | Ser | Asp | Asp | Val | Ser | Thr | Asp | Arg | Gly | Pro | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Pro | Pro | Ser | Pro | Leu | Lys | Glu | Thr | Ser | Phe | Ser | Ile | Gly | Leu | Gln | Val |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Leu | Phe | Pro | Phe | Leu | Leu | Ala | Gly | Phe | Gly | Thr | Val | Ala | Ala | Gly | Met |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Val | Leu | Asp | Ile | Val | Gln | His | Trp | Glu | Val | Phe | Gln | Lys | Val | Thr | Glu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Val | Phe | Ile | Leu | Val | Pro | Ala | Leu | Leu | Gly | Leu | Lys | Gly | Asn | Leu | Glu |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Met | Thr | Leu | Ala | Ser | Arg | Leu | Ser | Thr | Ala | Ala | Asn | Ile | Gly | His | Met |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Asp | Thr | Pro | Lys | Glu | Leu | Trp | Arg | Met | Ile | Thr | Gly | Asn | Met | Ala | Leu |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Ile | Gln | Val | Gln | Ala | Pro | Val | Val | Gly | Phe | Leu | Ala | Ser | Ile | Ala | Ala |
|     |     |     | 130 |     |     |     | 135 |     |     |     | 140 |     |     |     |     |
| Val | Val | Phe | Gly | Trp | Ile | Pro | Asp | Gly | His | Phe | Ser | Ile | Pro | His | Ala |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Phe | Leu | Leu | Cys | Gly |     |     |     |     |     |     |     |     |     |     |     |
|     |     |     |     | 165 |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 1519

&lt;211&gt; 2076

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1519

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gtgtgcaatg agatgttggg aaaatcccag tttgttgctt gtatggctac ttgtcattca  
120  
cttacaaaaa ttgaaggagt gctctctggg gatccacttg atctgaaaat gtttgaggct  
180  
attggatgga ttctggaaga agcaactgaa gaagaaacag cacttcataa tcgaattatg  
240  
cccacagtgg ttcttctctc caaacaactg cttcctgaat ctacccctgc aggaaaccaa  
300  
gaaatggagc tgtttgaact tccagctact tatgagatag gaattgttcg ccagtcccca  
360  
ttttcttctg ctttgcaacg tatgagtgtg gttgccaggg tgctggggga taggaaaatg  
420  
gacgcctaca tgaagggagc gcccagggcc attgccggtc tctgtaaacc tgaaacagtt  
480  
cctgtcgatt ttcaaaacgt tttggaagac ttcactaaac agggcttccg tgtgattgct  
540  
cttgacaca gaaaattgga gtcaaaactg acatggcata aagtacagaa tattagcaga  
600  
gatgcaattg agaacaacat ggattttatg ggattaatta taatgcagaa caaattaaag  
660  
caagaaaccc ctgcagtact tgaagatttg cataaagcca acattcgcac cgtcatggtc  
720  
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780  
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840  
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900  
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1260  
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1320  
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1380  
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1440  
gcctggaaag aacttgtggc acaaagacca ccttcgggtc ttatatctgg ggcccttctc  
1500  
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1560

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 1620  
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 1680  
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 1740  
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 1800  
 gttttttctg tgattttttt atatattttt atattattca tcatgttgta tccagttgcc  
 1860  
 tctgttgacc aggttcttca gatagtgtgt gtaccatata agtggcgtgt aactatgctc  
 1920  
 atcattgttc ttgtcaatgc ctttgtgtct atcacagtgg agaacttctt ccttgacatg  
 1980  
 gtccttttga aagttgtgtt caaccgagac aaacaaggag agtatcggtt cagcaccaca  
 2040  
 cagccaccgc aggagtcagt ggatcgggtg ggaaaa  
 2076

<210> 1520  
 <211> 692  
 <212> PRT  
 <213> Homo sapiens

<400> 1520  
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 Pro Glu Glu Asn Val Cys Asn Glu Met Leu Val Lys Ser Gln Phe Val  
 20 25 30  
 Ala Cys Met Ala Thr Cys His Ser Leu Thr Lys Ile Glu Gly Val Leu  
 35 40 45  
 Ser Gly Asp Pro Leu Asp Leu Lys Met Phe Glu Ala Ile Gly Trp Ile  
 50 55 60  
 Leu Glu Glu Ala Thr Glu Glu Glu Thr Ala Leu His Asn Arg Ile Met  
 65 70 75 80  
 Pro Thr Val Val Arg Pro Pro Lys Gln Leu Leu Pro Glu Ser Thr Pro  
 85 90 95  
 Ala Gly Asn Gln Glu Met Glu Leu Phe Glu Leu Pro Ala Thr Tyr Glu  
 100 105 110  
 Ile Gly Ile Val Arg Gln Phe Pro Phe Ser Ser Ala Leu Gln Arg Met  
 115 120 125  
 Ser Val Val Ala Arg Val Leu Gly Asp Arg Lys Met Asp Ala Tyr Met  
 130 135 140  
 Lys Gly Ala Pro Glu Ala Ile Ala Gly Leu Cys Lys Pro Glu Thr Val  
 145 150 155 160  
 Pro Val Asp Phe Gln Asn Val Leu Glu Asp Phe Thr Lys Gln Gly Phe  
 165 170 175  
 Arg Val Ile Ala Leu Ala His Arg Lys Leu Glu Ser Lys Leu Thr Trp  
 180 185 190  
 His Lys Val Gln Asn Ile Ser Arg Asp Ala Ile Glu Asn Asn Met Asp  
 195 200 205  
 Phe Met Gly Leu Ile Ile Met Gln Asn Lys Leu Lys Gln Glu Thr Pro  
 210 215 220  
 Ala Val Leu Glu Asp Leu His Lys Ala Asn Ile Arg Thr Val Met Val

225                      230                      235                      240  
 Thr Gly Asp Ser Met Leu Thr Ala Val Ser Val Ala Arg Asp Cys Gly  
                                  245                      250                      255  
 Met Ile Leu Pro Gln Asp Lys Val Ile Ile Ala Glu Ala Leu Pro Pro  
                                  260                      265                      270  
 Lys Asp Gly Lys Val Ala Lys Ile Asn Trp His Tyr Ala Asp Ser Leu  
                                  275                      280                      285  
 Thr Gln Cys Ser His Pro Ser Ala Ile Asp Pro Glu Ala Ile Pro Val  
                                  290                      295                      300  
 Lys Leu Val His Asp Ser Leu Glu Asp Leu Gln Met Thr Arg Tyr His  
 305                                   310                                   315                                   320  
 Phe Ala Met Asn Gly Lys Ser Phe Ser Val Ile Leu Glu His Phe Gln  
                                  325                                   330                                   335  
 Asp Leu Val Pro Lys Leu Met Leu His Gly Thr Val Phe Ala Arg Met  
                                  340                                   345                                   350  
 Ala Pro Asp Gln Lys Thr Gln Leu Ile Glu Ala Leu Gln Asn Val Asp  
                                  355                                   360                                   365  
 Tyr Phe Val Gly Met Cys Gly Asp Gly Ala Asn Asp Cys Gly Ala Leu  
                                  370                                   375                                   380  
 Lys Arg Ala His Gly Gly Ile Ser Leu Ser Glu Leu Glu Ala Ser Val  
 385                                   390                                   395                                   400  
 Ala Ser Pro Phe Thr Ser Lys Thr Pro Ser Ile Ser Cys Val Pro Asn  
                                  405                                   410                                   415  
 Leu Ile Arg Glu Gly Arg Ala Ala Leu Ile Thr Ser Phe Cys Val Phe  
                                  420                                   425                                   430  
 Lys Phe Met Ala Leu Tyr Ser Ile Ile Gln Tyr Phe Ser Val Thr Leu  
                                  435                                   440                                   445  
 Leu Tyr Ser Ile Leu Ser Asn Leu Gly Asp Phe Gln Phe Leu Phe Ile  
                                  450                                   455                                   460  
 Asp Leu Ala Ile Ile Leu Val Val Val Phe Thr Met Ser Leu Asn Pro  
 465                                   470                                   475                                   480  
 Ala Trp Lys Glu Leu Val Ala Gln Arg Pro Pro Ser Gly Leu Ile Ser  
                                  485                                   490                                   495  
 Gly Ala Leu Leu Phe Ser Val Leu Ser Gln Ile Ile Ile Cys Ile Gly  
                                  500                                   505                                   510  
 Phe Gln Ser Leu Gly Phe Phe Trp Val Lys Gln Gln Pro Trp Tyr Glu  
                                  515                                   520                                   525  
 Val Trp His Pro Lys Ser Asp Ala Cys Asn Thr Thr Gly Ser Gly Phe  
                                  530                                   535                                   540  
 Trp Asn Ser Ser His Val Asp Asn Glu Thr Glu Leu Asp Glu His Asn  
 545                                   550                                   555                                   560  
 Ile Gln Asn Tyr Glu Asn Thr Thr Val Phe Phe Ile Ser Ser Phe Gln  
                                  565                                   570                                   575  
 Tyr Leu Ile Val Ala Ile Ala Phe Ser Lys Gly Lys Pro Phe Arg Gln  
                                  580                                   585                                   590  
 Pro Cys Tyr Lys Asn Tyr Phe Phe Val Phe Ser Val Ile Phe Leu Tyr  
                                  595                                   600                                   605  
 Ile Phe Ile Leu Phe Ile Met Leu Tyr Pro Val Ala Ser Val Asp Gln  
                                  610                                   615                                   620  
 Val Leu Gln Ile Val Cys Val Pro Tyr Gln Trp Arg Val Thr Met Leu  
 625                                   630                                   635                                   640  
 Ile Ile Val Leu Val Asn Ala Phe Val Ser Ile Thr Val Glu Asn Phe  
                                  645                                   650                                   655  
 Phe Leu Asp Met Val Leu Trp Lys Val Val Phe Asn Arg Asp Lys Gln

660                      665                      670  
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 Arg Trp Gly Lys  
                     690

<210> 1521  
 <211> 373  
 <212> DNA  
 <213> Homo sapiens

<400> 1521  
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 60  
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 120  
 gcgtaccatc cgatacacgc cagccttgac tgctgatata cccagccac tgcgcatcag  
 180  
 tgatttcaat ggcggttaca cagtctggta tcggactgtc gatatcatcg taataggcga  
 240  
 tcacattccc atttgcacg tatgctgcga acttttgacc catgattatt atttcccgaa  
 300  
 tgcaaaccac taaacagtgt tggcgcttga tgaatagccg ttctgcacca cggcggtaga  
 360  
 gagtggcgtc gac  
 373

<210> 1522  
 <211> 94  
 <212> PRT  
 <213> Homo sapiens

<400> 1522  
 Met Gly Gln Lys Phe Ala Ala Tyr Asp Ala Asn Gly Asn Val Ile Ala  
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 Tyr Tyr Asp Asp Ile Asp Ser Pro Ile Pro Asp Cys Val Thr Ala Ile  
                     20                    25                    30  
 Glu Ile Thr Asp Ala Gln Trp Leu Gly Cys Ile Ser Ser Gln Gly Trp  
                     35                    40                    45  
 Arg Val Ser Asp Gly Thr Leu Val Ala Pro Val Pro Pro Thr Phe Ala  
                     50                    55                    60  
 Glu Leu Leu Val Glu Ala Gln Arg Val Gln Thr Gln Val Ile Asp Ser  
 65                    70                    75                    80  
 Ala Cys Ala Ser Ala Ile Thr Ala Gly Phe Ser Cys Asp Ala  
                     85                    90

<210> 1523  
 <211> 525  
 <212> DNA  
 <213> Homo sapiens

<400> 1523  
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 60

cagcatggca cccatgccga gaggagacac aaaaaactgc ctctgacagc tcttgctcaa  
 120  
 aatatgcaag aagcatcgac tcagctggaa gactctctcc tggggaagat gctggagacg  
 180  
 tgtggagatg ctgagaatca gctggctctc gagctctccc agcacgaagt ctttggtgag  
 240  
 aaggagatcg tggaccctct gtacggcata gctgaggtgg agattcccaa catccagaag  
 300  
 cagaggaagc agcttgcaag attggtgtta gactgggatt cagtcagagc caggtggaac  
 360  
 caagctcaca aatcctcagg aaccaacttt caggggcttc catcaaaaat agatactcta  
 420  
 aaggaagggg tggatgaagc tggaaataaa gtagaacagt gcaaggatca acttgcacga  
 480  
 gacatgtaca actttatggc caaagaaggg gagtatggca aattt  
 525

<210> 1524  
 <211> 175  
 <212> PRT  
 <213> Homo sapiens

<400> 1524  
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 Cys Phe Gln Gly Gln His Gly Thr Asp Ala Glu Arg Arg His Lys Lys  
 20 25 30  
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 35 40 45  
 Leu Glu Asp Ser Leu Leu Gly Lys Met Leu Glu Thr Cys Gly Asp Ala  
 50 55 60  
 Glu Asn Gln Leu Ala Leu Glu Leu Ser Gln His Glu Val Phe Val Glu  
 65 70 75 80  
 Lys Glu Ile Val Asp Pro Leu Tyr Gly Ile Ala Glu Val Glu Ile Pro  
 85 90 95  
 Asn Ile Gln Lys Gln Arg Lys Gln Leu Ala Arg Leu Val Leu Asp Trp  
 100 105 110  
 Asp Ser Val Arg Ala Arg Trp Asn Gln Ala His Lys Ser Ser Gly Thr  
 115 120 125  
 Asn Phe Gln Gly Leu Pro Ser Lys Ile Asp Thr Leu Lys Glu Gly Met  
 130 135 140  
 Asp Glu Ala Gly Asn Lys Val Glu Gln Cys Lys Asp Gln Leu Ala Ala  
 145 150 155 160  
 Asp Met Tyr Asn Phe Met Ala Lys Glu Gly Glu Tyr Gly Lys Phe  
 165 170 175

<210> 1525  
 <211> 294  
 <212> DNA  
 <213> Homo sapiens

<400> 1525  
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 120  
 ctgcgttctt ccctggacta tgaatatgaa ctgccgatgg cccagatgaa ccggcgttta  
 180  
 tctggcatcg atacgggtctt tttgcttacc gatgaaaagt acggctacat cagctcatcg  
 240  
 ctgtgcaaac aggtcgcgca attcggcggg gaggtcaccg ggatgcttcg gatc  
 294

<210> 1526  
 <211> 98  
 <212> PRT  
 <213> Homo sapiens

<400> 1526  
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 Asn Val Asp Tyr Trp Ser Gly Leu Leu Val Asp Tyr Thr Ser Gln His  
 20 25 30  
 Gly Val Asp Val Leu Val Lys Gly Leu Arg Ser Ser Leu Asp Tyr Glu  
 35 40 45  
 Tyr Glu Leu Pro Met Ala Gln Met Asn Arg Arg Leu Ser Gly Ile Asp  
 50 55 60  
 Thr Val Phe Leu Leu Thr Asp Glu Lys Tyr Gly Tyr Ile Ser Ser Ser  
 65 70 75 80  
 Leu Cys Lys Gln Val Ala Gln Phe Gly Gly Glu Val Thr Gly Met Leu  
 85 90 95  
 Arg Ile

<210> 1527  
 <211> 371  
 <212> DNA  
 <213> Homo sapiens

<400> 1527  
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 120  
 acttcgcctt ggtgcacggg gttggcatga ccggcgagta cccttgggtg gtgcaccgcg  
 180  
 aagacattga cgcgctgggt tacgacgggtg tgttcgagga cggcatgacc atctgtgtgg  
 240  
 aaagctacat cggccacgac gacggcggcg aaggcgtgaa gtcgaagaa cagatctaca  
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 360  
 gctgaacgcg t  
 371

<210> 1528  
 <211> 109  
 <212> PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1528

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      20             25             30
Val His Gly Val Gly Met Thr Gly Glu Tyr Pro Trp Val Val His Arg
      35             40             45
Glu Asp Ile Asp Ala Leu Gly Tyr Asp Gly Val Phe Glu Ala Gly Met
      50             55             60
Thr Ile Cys Val Glu Ser Tyr Ile Gly His Asp Asp Gly Gly Glu Gly
      65             70             75             80
Val Lys Leu Glu Glu Gln Ile Tyr Ile His Glu His Ser Ile Glu Leu
      85             90             95
Leu Ser Asp Tyr Pro Phe Asp Pro Arg Leu Leu Pro Arg
      100             105

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&lt;210&gt; 1529

&lt;211&gt; 609

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1529

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180
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240
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480
acgcattcgg ccattggtct caccactctg cgaggagcac agcctcttct ccaccgtcca
540
atagcgtggt cctcctttcc caggcctcac agaatgctct gtccgcatcc tcccagcatt
600
ccattcacg
609

```

&lt;210&gt; 1530

&lt;211&gt; 125

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1530

```

Leu Ala Leu Cys Pro Ala Gln Gly Ser Pro Ser Val Gly Leu Ala Leu

```



|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1   |     | 5   |     | 10  |     | 15  |     |     |     |     |     |     |     |     |     |
| Cys | Pro | Ala | Gln | Gly | Ser | Pro | Ser | Val | Gly | Leu | Ala | Leu | Cys | Pro | Ala |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gln | Gly | Ser | Pro | Ser | Val | Gly | Leu | Ala | Leu | Cys | Pro | Ala | Gln | Gly | Ser |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Pro | Ser | Val | Gly | Leu | Ala | Leu | Cys | Pro | Ala | Gln | Gly | Ser | Pro | Ser | Val |
|     |     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |
| Gly | Leu | Ala | Leu | Cys | Pro | Ala | Gln | Gly | Ser | Pro | Ser | Val | Gly | Leu | Ala |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Leu | Cys | Pro | Ala | Gln | Gly | Ser | Pro | Ser | Val | Gly | Phe | Ala | Leu | Cys | Leu |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ala | Gln | Ala | Ala | Gln | Gly | Asn | Gly | Gly | Thr | Ser | Arg | Ala | Gly | Pro | Ala |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Ala | Pro | Ser | Thr | Gln | Pro | Pro | Ser | Pro | Ala | Gly | His | Leu |     |     |     |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

&lt;210&gt; 1531

&lt;211&gt; 726

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1531

```

accggtcgcc ggcttgctga gggtaacctt ctggccacag ttggtgatgg tgataggtcc
60
agcgttggac tgggacgccg acgctgaaaa agaagctgac gagtccttgg gggcgccccg
120
acattcggca agcatgagga cggggagcat cgagaccgag acagctcggc gaaggaattt
180
cggggtggca ggcattggca aactagcttt ctgtgatcgg cgtgcgcggc cgggcaacaa
240
cagggcgctc tcaggtggtc ttcgggctcg acttcgtctc cgttcccggc accttcccag
300
tgcatgaggc caggtgggtc aagtcggggc ggatcagtca taccgctgag ctacgctcgg
360
gcttttcacc ggattccage gctggtgtgg tcaccagcaa cctgacgcga ggatttttagc
420
accccttcg cataccgcta tccagggcct ccacgacagc ggcaccgatg acgatcgcgt
480
tcaccgagcg cggcgttttc ggcagcttcc acatggggat cagaccatat tgatgcactg
540
gcgatccctt catacgcgag cgcgggatat ggcggggcag tgaggcccct cagttcgcgc
600
tgacgcatgc cgctctgcgc agcctgccaa cgctttcccg caacctcacc acacgtttgc
660
cgggttcggg gctggcgacg tgagccgtgt cacaagttca cgagctgggt caccgctcgg
720
cgagag
726

```

&lt;210&gt; 1532

&lt;211&gt; 178

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1532

Met Val Ile Gly Pro Ala Leu Asp Trp Asp Ala Asp Ala Glu Lys Glu  
 1 5 10 15  
 Ala Asp Glu Ser Leu Gly Ala Pro Ala His Ser Ala Ser Met Arg Thr  
 20 25 30  
 Gly Ser Ile Glu Thr Ala Thr Ala Arg Arg Arg Asn Phe Gly Val Ala  
 35 40 45  
 Gly Met Ala Lys Leu Ala Phe Cys Asp Arg Arg Ala Arg Pro Gly Asn  
 50 55 60  
 Asn Arg Ala Ser Ser Gly Gly Leu Arg Ala Arg Leu Arg Leu Arg Ser  
 65 70 75 80  
 Arg His Leu Pro Ser Ala His Gly Gln Val Val Gln Val Gly Ala Asp  
 85 90 95  
 Gln Ser Tyr Arg Cys Ala Gln Leu Arg Leu Phe Thr Gly Phe Gln Arg  
 100 105 110  
 Trp Cys Gly His Gln Gln Pro Asp Ala Arg Ile Leu Ala Pro Pro Ser  
 115 120 125  
 His Thr Ala Ile Gln Gly Leu His Asp Ser Gly Thr Asp Asp Asp Arg  
 130 135 140  
 Val His Arg Ala Arg Arg Phe Arg Gln Leu Pro His Gly Asp Gln Thr  
 145 150 155 160  
 Ile Leu Met His Trp Arg Ser Leu His Thr Arg Ala Ala Asp Met Ala  
 165 170 175  
 Pro Glu

&lt;210&gt; 1533

&lt;211&gt; 364

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1533

natatgctgg tcgatcatgt gcatcagatc gtccagtggc cggagcgcg cttggctggcg  
 60  
 gagattattc acagcgaacg ggcgaccggc ggtgcgccgc ttaacgtcct gctgacgctg  
 120  
 gttaaaatgc acgtcggtt gccgttgacg gcggtcggtc ttatcggcga agacagcgat  
 180  
 ggcgattaca ttatggcgat gctcgaccag taccacgtca atcgccagcg ggtacagcgc  
 240  
 accacgtttg ccccccacgtc gatgtcgacg gtgatgaccg atcccactgg gcagcgcacc  
 300  
 tttttccatt cgcctgccgc caatcgctg ctcgatctcc ccgcctttga tcgactcgac  
 360  
 gcgt  
 364

&lt;210&gt; 1534

&lt;211&gt; 121

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1534

Xaa Met Leu Val Asp His Val His Gln Ile Val Gln Trp Pro Glu Arg

```

      1           5           10           15
Gly Trp Leu Ala Glu Ile Ile His Ser Glu Arg Ala Thr Gly Gly Ala
      20           25           30
Pro Leu Asn Val Leu Leu Thr Leu Val Lys Met His Val Gly Leu Pro
      35           40           45
Leu Gln Ala Val Gly Leu Ile Gly Glu Asp Ser Asp Gly Asp Tyr Ile
      50           55           60
Met Ala Met Leu Asp Gln Tyr His Val Asn Arg Gln Arg Val Gln Arg
      65           70           75           80
Thr Thr Phe Ala Pro Thr Ser Met Ser Gln Val Met Thr Asp Pro Thr
      85           90           95
Gly Gln Arg Thr Phe Phe His Ser Pro Ala Ala Asn Arg Leu Leu Asp
      100          105          110
Leu Pro Ala Phe Asp Arg Leu Asp Ala
      115          120

```

&lt;210&gt; 1535

&lt;211&gt; 369

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1535

```

gaattcggggg ggctccggga atgaagtttc catttcgcaa gccttctgaa gcaaattccgc
60
caatccctgg ggcccgcggt gcggtgccggc cagcggccag tcttgccccg gaatgatcca
120
ctcgatatct tcggcagaca acgccagcag accgggccta tcgccgcggc ccatggctgc
180
aaaaaaaaactc ttcacagtct ggacattccc ttgtgtgctc atcgaaatct ctccatgtcc
240
tttacctggg atcgtgtccg atctcatcgg acgcgttgag gacctgctgg tgaggacggg
300
gtgtcgggtga ttcagccgat atcgactttg catggcgatg tcccagctgc cggagccgtt
360
actggccac
369

```

&lt;210&gt; 1536

&lt;211&gt; 111

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1536

```

Met Gln Ser Arg Tyr Arg Leu Asn His Arg His Pro Val Leu Thr Ser
  1           5           10           15
Arg Ser Ser Thr Arg Pro Met Arg Ser Asp Thr Ile Pro Gly Lys Gly
      20           25           30
His Gly Glu Ile Ser Met Ser Thr Gln Gly Asn Val Gln Thr Val Lys
      35           40           45
Ser Phe Phe Ala Ala Met Gly Arg Gly Asp Arg Pro Gly Leu Leu Ala
      50           55           60
Leu Ser Ala Glu Asp Ile Glu Trp Ile Ile Pro Gly Gln Asp Trp Pro
      65           70           75           80
Leu Ala Gly Thr His Arg Gly Pro Gln Gly Leu Ala Asp Leu Leu Gln

```

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |    |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|----|
|     |     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     |  | 95 |
| Lys | Ala | Cys | Glu | Met | Glu | Thr | Ser | Phe | Pro | Glu | Pro | Pro | Glu | Phe |  |    |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |  |    |

<210> 1537  
 <211> 294  
 <212> DNA  
 <213> Homo sapiens

<400> 1537  
 ccactcgcgg cgctcctga gccctctcgt gtgtcaggac gccagcatcc tgttcgtgtt  
 60  
 ctcggggctg ctgcacgtgt accagcggaa gatcggcagc caggaggaca cctgcttgtt  
 120  
 cctcacgcgc cccggggaga tgggtggcca gctggccgtg ctcaccgagg agacctcgtc  
 180  
 ggcgtggtgg agacactgac ccaccaggcc cgggcgacca cggtgcatgc cgttcgggac  
 240  
 tcagaattgg ccaagctgcc ggcaggagcc ctcacgtcca tcaagcgcag gtac  
 294

<210> 1538  
 <211> 98  
 <212> PRT  
 <213> Homo sapiens

<400> 1538  
 Pro Leu Ala Ala Pro Pro Glu Pro Ser Arg Val Ser Gly Arg Gln His  
 1 5 10 15  
 Pro Val Arg Val Leu Gly Ala Ala Ala Arg Val Pro Ala Glu Asp Arg  
 20 25 30  
 Gln Pro Gly Gly His Leu Leu Val Pro His Ala Pro Arg Gly Asp Gly  
 35 40 45  
 Gly Pro Ala Gly Arg Ala His Arg Gly Asp Leu Val Gly Val Val Glu  
 50 55 60  
 Thr Leu Thr His Gln Ala Arg Ala Thr Thr Val His Ala Val Arg Asp  
 65 70 75 80  
 Ser Glu Leu Ala Lys Leu Pro Ala Gly Ala Leu Thr Ser Ile Lys Arg  
 85 90 95  
 Arg Tyr

<210> 1539  
 <211> 1015  
 <212> DNA  
 <213> Homo sapiens

<400> 1539  
 acgcgttcgg gcgtcaggca cacgcatctc aacagatgtg gctgacaccc aaggcagtcg  
 60  
 gcctcagtcg cctgtcaccc acctagaacc tgttcacagc atgtcatccg ggctgctctg  
 120  
 gccttgactg gacatgatta tttatcctta cacaccgtgg ctgctctaca ggccaagaaa  
 180

caggctgctc agccaggggc aggagaaggt gggtcaggct ccccggggac ctcaggccct  
 240  
 gacgcatcct ggcctcacc taggcctcct ctgtcggggc agcctggctc agcagagccc  
 300  
 gggacacacg gctgaggcca cccaggtggt gccatcttgc cctgttttg tgccccctac  
 360  
 tcagttctcc ttctgtcctg gctcaggctt aggccagtca agaggggtggc tgagaagcag  
 420  
 gaggagcctc agagaccctc ccctcgaaag cactgggggt tccacctcac aagcggcagg  
 480  
 ttcgcttttg gagctgctgg tccatcgccc aggcctggcc aggggcaggc gaggatcctg  
 540  
 gttgccgata catcgccag gcctggccca ggagccggtg aggaacctgg ggctgttgtg  
 600  
 caggggtcgc cgtctccagc tctctgccgt ggtgagggga ttgtgctgtg tgcacaccac  
 660  
 ctggctgcat cgaatccac catggcccag aggggtggacc tgtggctcct tggggggcca  
 720  
 gcacccccag tctaattgggt gcccctgccca ctctcctgag ttccctgca gagctcccc  
 780  
 caacacctca gccttcacct ttctcagtta atcaaaagat tccaaaaaaa gcaaaccat  
 840  
 cagaacgggt tctccaccg agtggtcagg ataaataatc atgtccagtc aaggccagag  
 900  
 cagccccgat gacatgctat gaacaggttt taggtgggtg acagggcact gaggccgact  
 960  
 gccttgggtg tcagccacat ctgttgagat gcgtgtgcct gacgcccga cgcgt  
 1015

<210> 1540  
 <211> 89  
 <212> PRT  
 <213> Homo sapiens

<400> 1540  
 His Pro Arg Gln Ser Ala Ser Val Pro Cys His Pro Pro Arg Thr Cys  
 1 5 10 15  
 Ser Gln His Val Ile Arg Ala Ala Leu Ala Leu Thr Gly His Asp Tyr  
 20 25 30  
 Leu Ser Leu His Thr Val Ala Ala Leu Gln Ala Lys Lys Gln Ala Ala  
 35 40 45  
 Gln Pro Gly Ser Gly Glu Gly Gly Ser Gly Ser Pro Gly Thr Ser Gly  
 50 55 60  
 Pro Asp Ala Ser Trp Pro His Pro Arg Pro Pro Leu Ser Gly Gln Pro  
 65 70 75 80  
 Gly Ser Ala Glu Pro Gly Thr His Gly  
 85

<210> 1541  
 <211> 1482  
 <212> DNA  
 <213> Homo sapiens

<400> 1541

cgccgatcac ggggagcccc tcgactgcct ccagaaacaa agtgggaaaag ggaagcttag  
60  
cccgcgctg ccgcctccga gcagcccgcc aggactctgg ctactggaga tgggcgcccc  
120  
gctatcgcg cgacgggtgc cggcgagacc gtccctggcc ctggacgcgc tgcccccgga  
180  
gctgtggtg cagggtgctga gccacgtgcc ggccacgctc cttggacacg cgatgccgcc  
240  
cagtgtgccc cgcttggcgc gacatagtgg acgggcccac tgggaggctg ctgcaactgg  
300  
cccgcgaccg cagcgccgag ggccgagcac tctacgcagt ggctcaacgc tgctgccca  
360  
acaacgaaga caaagaggag ttcccgctgt gcgccctggc gcgctactga ctgcgcgcgc  
420  
ccttcggccg caatctcatc ttcaactcct gcggagagca gggcttcaga ggctgggagg  
480  
tggagcatgg cgggaacggc tggggccatag aaaagaacct aacaccggtg cctggggctc  
540  
cttcgcagac ctgcttcgtg acctctttcg aatggtgctc caagaggcag cttgtggacc  
600  
tggtgatgga aggggtgtgg caggagctgc tggacagcgc ccagattgag atctgtgtgg  
660  
ctgactggtg gggcgctcga gagaactgcg gctgcgtcta ccagctccgg gtccgccttc  
720  
tggatgtgta tgaaaaggaa gtggtcaagt tctcagctc acctgaccgc gtccttcagt  
780  
ggactgagag gggctgccga caggctctcc acgtcttcac caactttggc aagggcattc  
840  
gtacgtatc ttttgagcag tacgggagag acgtgagttc ctgggtgggg cactatggcg  
900  
cccttgtgac cactccagt gtgaggggtca ggatccgtct gtcctagcga ctggactact  
960  
gcctgacgtt gtcagtcaag accagccttg cagccagggt cagtggctca cacctgtggg  
1020  
atcctccac tttggccttc caaaatgttg cgattatagg cgtgagccac tgtggctggc  
1080  
ctgaaatctt ctagtatcca cattcataaa gtaaaaagaa aataaaaagg catagaatgt  
1140  
caagctaacc aggcgtccgc tacttcagaa gagtgtactg tcgcatgggg agtctgtaac  
1200  
catgcttttc acttccactg catctctcgc tggctcaaaa cacgacaggt gtgtccattg  
1260  
gacaacagag agtgggaatt caaaagtat gggcactagg aaaagacttc ttccatcaag  
1320  
cttaattgtt ttgttattca tttaatgact ttccctgctg ttacctaat acaaatggga  
1380  
tggaactgtg tttttttctg ctttgttttt tcagtttgcg gtttctgtag ccatattgta  
1440  
ttctgtgtca aataaagtcc agttggattc tggaaaaaaa aa  
1482

&lt;210&gt; 1542

&lt;211&gt; 57

&lt;212&gt; PRT

<213> Homo sapiens

<400> 1542

Lys Gly Ile Glu Cys Gln Ala Asn Gln Ala Ser Ala Thr Ser Glu Glu  
 1 5 10 15  
 Cys Thr Val Ala Trp Gly Val Cys Asn His Ala Phe His Phe His Cys  
 20 25 30  
 Ile Ser Arg Trp Leu Lys Thr Arg Gln Val Cys Pro Leu Asp Asn Arg  
 35 40 45  
 Glu Trp Glu Phe Gln Lys Tyr Gly His  
 50 55

<210> 1543

<211> 311

<212> DNA

<213> Homo sapiens

<400> 1543

gctagcgatg ctactttaag gtatgcgaag ttggatgctg acgttgcctc ctatcggttg  
 60  
 gagtcaaacg gacgaacaag cgttcgaggt agctttaaat gcgggcgacg ccagaaaagt  
 120  
 accaaaagtcg gtgccgcgcc ttatgtttct cgaatggctc acgcgccgag gctacttget  
 180  
 ccacggctcg agccgagccg acctcgtttg ttttgaacct cgagcaccca aagacttcag  
 240  
 ccttgacgag ttcagcaaac gcaccgccgt tttcgctctc tcagatgggg tgtggccccc  
 300  
 cncncncnc c  
 311

<210> 1544

<211> 96

<212> PRT

<213> Homo sapiens

<400> 1544

Met Arg Ser Trp Met Leu Thr Leu Pro Pro Ile Gly Trp Ser Gln Thr  
 1 5 10 15  
 Asp Glu Gln Ala Phe Glu Val Ala Leu Asn Ala Gly Asp Ala Arg Lys  
 20 25 30  
 Leu Pro Lys Ser Val Pro Arg Leu Met Phe Leu Glu Trp Leu Thr Arg  
 35 40 45  
 Arg Gly Tyr Leu Leu His Gly Ser Ser Arg Ala Asp Leu Val Cys Phe  
 50 55 60  
 Glu Pro Arg Ala Pro Lys Asp Phe Ser Pro Asp Glu Phe Ser Lys Arg  
 65 70 75 80  
 Thr Ala Val Phe Ala Ser Ser Asp Gly Val Trp Pro Pro Xaa Xaa Xaa  
 85 90 95

<210> 1545

<211> 362

<212> DNA

<213> Homo sapiens

&lt;400&gt; 1545

ccatggtgcg gccgtctggt aacgataggc aaatccttgc catgccacca attcttcctt  
60  
caacagtagt tggcgaatcc ttcgatggtc aagtcctgtg agcttgctca tctgacggat  
120  
cgtctctgtc tcaagcacct cgcctgtttc caggttcaag gcctggatag tgcgagtgtc  
180  
gtactggtcg atcaattcca ccgagtggtc tgggtagccc cttgccattc gctttatgat  
240  
ctcaaccata gatgcatttg gcatgttcca gagcttgtag tccttaacga tctctctggc  
300  
gtcgtagaaa accttcacgc tatcgtcagg atgggtcact gtgggtgatgt accgtccaga  
360  
ac  
362

&lt;210&gt; 1546

&lt;211&gt; 92

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1546

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Val | Lys | Ser | Cys | Glu | Leu | Ala | His | Leu | Thr | Asp | Arg | Leu | Cys | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Lys | His | Leu | Ala | Cys | Phe | Gln | Val | Gln | Gly | Leu | Asp | Ser | Ala | Ser | Val |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Val | Leu | Val | Asp | His | Phe | His | Arg | Val | Val | Trp | Val | Ala | Pro | Cys | His |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ser | Leu | Tyr | Asp | Leu | Asn | His | Arg | Cys | Ile | Trp | His | Val | Pro | Glu | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Val | Leu | Leu | Asn | Asp | Leu | Ser | Gly | Val | Val | Glu | Asn | Leu | His | Ala | Ile |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Val | Arg | Met | Gly | His | Cys | Gly | Asp | Val | Pro | Ser | Arg |     |     |     |     |
|     |     |     |     | 85  |     |     |     | 90  |     |     |     |     |     |     |     |

&lt;210&gt; 1547

&lt;211&gt; 429

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1547

cgcgttgcca caccggaaga cccggccagc tcacgcctgg gtgaaagttt ctgggcgttc  
60  
ctgccgcgtt cgggtgtggtt cagcgccgtg tcggcgtgga acctggagcg cgagcgccctg  
120  
cgcaaactcg gcctgccggc ctggcactgg aagaacgccg tgctcagtgc ctggatgtac  
180  
agcgtggtgt tgtggggggt gatgattgtc tggttgggcg cggcggtgat tccgttcctg  
240  
atcattcagg gtgtctacgg gttctcgttg ctggaagtgg tcaactacgt cgagcactac  
300  
gggcttaaac gccagaagtt gcccaacggt cgttatgaac ggtgttcgcc tcggcactcg  
360



tggaacagca accggattgt caccaatatc tttctgttcc aacttcagcg gcattccgac  
 420  
 caccatgcc  
 429

<210> 1548  
 <211> 143  
 <212> PRT  
 <213> Homo sapiens

<400> 1548  
 Arg Val Ala Thr Pro Glu Asp Pro Ala Ser Ser Arg Leu Gly Glu Ser  
 1 5 10 15  
 Phe Trp Ala Phe Leu Pro Arg Ser Val Trp Phe Ser Ala Val Ser Ala  
 20 25 30  
 Trp Asn Leu Glu Arg Glu Arg Leu Arg Lys Leu Gly Leu Pro Ala Trp  
 35 40 45  
 His Trp Lys Asn Ala Val Leu Ser Ala Trp Met Tyr Ser Val Val Leu  
 50 55 60  
 Trp Gly Val Met Ile Val Trp Leu Gly Ala Ala Val Ile Pro Phe Leu  
 65 70 75 80  
 Ile Ile Gln Gly Val Tyr Gly Phe Ser Leu Leu Glu Val Val Asn Tyr  
 85 90 95  
 Val Glu His Tyr Gly Leu Lys Arg Gln Lys Leu Pro Asn Gly Arg Tyr  
 100 105 110  
 Glu Arg Cys Ser Pro Arg His Ser Trp Asn Ser Asn Arg Ile Val Thr  
 115 120 125  
 Asn Ile Phe Leu Phe Gln Leu Gln Arg His Ser Asp His His Ala  
 130 135 140

<210> 1549  
 <211> 443  
 <212> DNA  
 <213> Homo sapiens

<400> 1549  
 gtcgacaggc tccaggggtc tgtttttag tgcacccgct gtggtgcaac atgcgtctgg  
 60  
 gcacaccagc gtcgcccgtt tcctgttgta gtctttcctc tctgactcca ggggtattgg  
 120  
 gtctttctgc cagcgcccat gcaactttgg cagcctggcc tgtctgctgg taagtggggc  
 180  
 agaatccctg cactccacca ttcttgggca acactccctc taggattttg gtctcccttt  
 240  
 tctctctggg ctttgaccac cgctaccag caaactcctc catctagacc agccagcatt  
 300  
 ggtttcttcc actccccag ctgcccgtg ggaggcgcca ctgcaaactt ccttgggggc  
 360  
 tcccagctgc tcagagatcc ccattgccctt cctgatcag ctcctgccc ggttctcatc  
 420  
 ccgacgcggc tgcattgata ttc  
 443

<210> 1550

```

<400> 1552
Met Asp Thr Pro Pro Leu Ala Leu Asn Met Thr Trp Leu Pro His Thr
 1          5          10          15
Arg Lys Pro Gln Arg Ser Ser Gln Leu Ala Lys His Pro Cys Pro Cys
 20          25          30
Pro Ala Gly Ser Thr Lys Ala Gly Gly Ala Asn Ala Ala His Leu Phe

```

```

          35          40          45
Phe Cys Pro Leu Leu Gln Gly Leu Pro Leu Cys Phe Gly Asp Gly Thr
   50          55          60
Lys Val Arg Glu Leu Pro Asp Thr Pro Ser Gln Gly Glu Asp Gly Ser
65          70          75          80
Ser Phe Leu His Leu Val Leu Thr Gln Pro Pro Gln Glu Thr Arg Gly
          85          90          95
Ile Pro Xaa Pro Xaa
          100

```

<210> 1553  
 <211> 657  
 <212> DNA  
 <213> Homo sapiens

```

<400> 1553
atcctgcaga atgatggcgt ggtcaccagc ccctattccc ggccacgcaa ggcgggccac
60
acgctactca tcctgggggg ccagaccttc atgtgtgaca agatctacca ggtggaccac
120
aaggccaagg agatcatccc caaggccgac ctgcccagcc cccggaagga gttcagcgcc
180
tcagcgatcg gctgcaaggt ctatgtgacg gggggcaggg gctccgagaa cggggtctcc
240
aaggatgtct ggggtgtacga caccgtacat gaggaatggt ccaaggcggc gcccattgctg
300
attgcccgtt ttggccatgg ctcagctgag ctggagaact gcctctatgt ggtgggggga
360
cacacatccc tggcaggggt cttcccggcc tcgccttctg tctccctgaa acaagtggag
420
aaatacgacc ctggggccaa caagtggatg atggtggccc ccttgcgagg tggcgctcagc
480
aatgccgcag tgggtgagtgc caagctgaag ctctttgttt ttggaggaac cagcatccac
540
cgggacatgg tgtccaaggt ccagtgtat gaccctcgg agaacaggtg gacgatcaag
600
gccgagtgcc ccagccttg gcggtacaca gccgctgccg tcctgggcag ccagatc
657

```

<210> 1554  
 <211> 219  
 <212> PRT  
 <213> Homo sapiens

```

<400> 1554
Ile Leu Gln Asn Asp Gly Val Val Thr Ser Pro Tyr Ser Arg Pro Arg
 1          5          10          15
Lys Ala Gly His Thr Leu Leu Ile Leu Gly Gly Gln Thr Phe Met Cys
          20          25          30
Asp Lys Ile Tyr Gln Val Asp His Lys Ala Lys Glu Ile Ile Pro Lys
          35          40          45
Ala Asp Leu Pro Ser Pro Arg Lys Glu Phe Ser Ala Ser Ala Ile Gly
          50          55          60
Cys Lys Val Tyr Val Thr Gly Gly Arg Gly Ser Glu Asn Gly Val Ser

```

```

65              70              75              80
Lys Asp Val Trp Val Tyr Asp Thr Val His Glu Glu Trp Ser Lys Ala
              85              90              95
Ala Pro Met Leu Ile Ala Arg Phe Gly His Gly Ser Ala Glu Leu Glu
              100             105             110
Asn Cys Leu Tyr Val Val Gly Gly His Thr Ser Leu Ala Gly Val Phe
              115             120             125
Pro Ala Ser Pro Ser Val Ser Leu Lys Gln Val Glu Lys Tyr Asp Pro
              130             135             140
Gly Ala Asn Lys Trp Met Met Val Ala Pro Leu Arg Asp Gly Val Ser
145             150             155             160
Asn Ala Ala Val Val Ser Ala Lys Leu Lys Leu Phe Val Phe Gly Gly
              165             170             175
Thr Ser Ile His Arg Asp Met Val Ser Lys Val Gln Cys Tyr Asp Pro
              180             185             190
Ser Glu Asn Arg Trp Thr Ile Lys Ala Glu Cys Pro Gln Pro Trp Arg
              195             200             205
Tyr Thr Ala Ala Ala Val Leu Gly Ser Gln Ile
              210             215

```

&lt;210&gt; 1555

&lt;211&gt; 328

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1555

```

acgcgtggga gctcgggaga gaggactctg cttctggggg ttgaaggtga gcgtgattct
60
ggaggagcct gccttgcggc gagcgtgtgt tgtggagagg atgcaggaca tgagtgatcc
120
tgtaaggggtg atcgagtgtg cctcgtgaag tctggaagtc agcgagtgtg ggccgtggag
180
gtgagccacc ggtttgtgat ttgaaactga gtgagagtgc tgtggagcgc gaaatatgtg
240
tgtgtgtaga gtggaggtga gcgaatttgt gtgcatgtga gacggacgca atggcagagt
300
gtagcatcct gtgttgggat tgggattn
328

```

&lt;210&gt; 1556

&lt;211&gt; 102

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1556

```

Met Leu His Ser Ala Ile Ala Ser Val Ser His Ala His Lys Phe Ala
 1              5              10              15
His Leu His Ser Thr His Thr His Ile Ser Arg Ser Thr Ala Leu Ser
              20              25              30
Leu Ser Phe Lys Ser Gln Thr Gly Gly Ser Pro Pro Arg Pro Thr Leu
              35              40              45
Ala Asp Phe Gln Thr Ser Arg Gly Thr Leu Asp His Pro Tyr Arg Ile
              50              55              60
Thr His Val Leu His Pro Leu His Asn Thr Arg Ser Pro Gln Gly Arg

```

```

65          70          75          80
Leu Leu Gln Asn His Ala His Leu Gln Thr Pro Glu Ala Glu Ser Ser
          85          90          95
Leu Pro Ser Ser His Ala
          100

```

```
<210> 1557
<211> 390
<212> DNA
<213> Homo sapiens
```

```

<400> 1557
gtgcacagac ttttcgagcg ggccattaag tggtttacgt ctgggatcgg ctccgctttc
60
tcgcattttt cggatcaggt caaatctctgt gctcggcatt gacaggaaat tgacgtgtat
120
cagtcgattc tttgcagtgt ctggacggca ggctgaatag gctgaaagca ggacaactac
180
gaccatgccg caccatgtgg atcgtctacc gttttggcct tgccgccatt gccttgatcg
240
ccctgattgc gctgttcgtg tgccagtacc ggctatcggc caggctggcg cgccggaagc
300
gaagctcgat gggcagcagg cgcagtagga acccggcgcc attgaatcgt gaggcgctgg
360
cggagcgcgg cccgttcaaa tgcgacgcgt
390

```

```
<210> 1558
<211> 114
<212> PRT
<213> Homo sapiens
```

```

<400> 1558
Met Ala Pro Gly Ser Ser Cys Ala Cys Cys Pro Ser Ser Phe Ala Ser
  1                      5                      10                      15
Gly Ala Pro Ala Trp Pro Ile Ala Gly Thr Gly Thr Arg Thr Ala Gln
          20                      25                      30
Ser Gly Arg Ser Arg Gln Trp Arg Gln Gly Gln Asn Gly Arg Arg Ser
          35                      40                      45
Thr Trp Cys Gly Met Val Val Val Val Leu Leu Ser Ala Tyr Ser Ala
          50                      55                      60
Cys Arg Pro Asp Thr Ala Lys Asn Arg Leu Ile His Val Asn Phe Leu
65                      70                      75                      80
Ser Met Pro Ser Thr Glu Phe Asp Leu Ile Arg Lys Met Arg Glu Ser
          85                      90                      95
Gly Ala Asp Pro Arg Arg Lys Pro Leu Asn Gly Pro Leu Glu Lys Ser
          100                      105                      110
Val His

```

```
<210> 1559
<211> 556
<212> DNA
<213> Homo sapiens
```

&lt;400&gt; 1559

accggtggcg acggtatcgg tggcgcgctcg atccttgcc t cggaatcctt cgctgcagag  
60  
ggtgagtcga agcgacccag cgtccagggtg ggcgaccggt tcatggagaa gctgctcatc  
120  
gagtgcaccc ttgacctctt caacgccggg gtagttgagg ccttgcagga ttccggtgcc  
180  
gccggaatct cctgtgccac ctccgagctg gccagtgtg ggcacgggtg catgcacgtc  
240  
gagctcgacc gcgttccgct gcgcgacccg aacctcgccc ctgaagagat cctcatgagc  
300  
gagtcacagg agcggatggc cgcgggtggtg cgccccgatc agcttgaccg cttcatggag  
360  
atctgcgccc attgggggtgt cgttgccact gtcattggcg aggtcaccga caccgggtcga  
420  
cttcacattg attggcaggg cgagcggatt gtcgacgtcg atccgaggac ggttgctcac  
480  
gacggaccgg ttctcgacat gccggccgcc cgtccgtggt ggattgatga gctcaacgag  
540  
aacgacgcta acgcgt  
556

&lt;210&gt; 1560

&lt;211&gt; 185

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1560

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Gly | Gly | Asp | Gly | Ile | Gly | Gly | Ala | Ser | Ile | Leu | Ala | Ser | Glu | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Phe | Ala | Ala | Glu | Gly | Glu | Ser | Lys | Arg | Pro | Ser | Val | Gln | Val | Gly | Asp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Pro | Phe | Met | Glu | Lys | Leu | Leu | Ile | Glu | Cys | Thr | Leu | Asp | Leu | Phe | Asn |
|     |     | 35  |     |     |     |     | 40  |     |     |     | 45  |     |     |     |     |
| Ala | Gly | Val | Val | Glu | Ala | Leu | Gln | Asp | Phe | Gly | Ala | Ala | Gly | Ile | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Cys | Ala | Thr | Ser | Glu | Leu | Ala | Ser | Ala | Gly | Asp | Gly | Gly | Met | His | Val |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Glu | Leu | Asp | Arg | Val | Pro | Leu | Arg | Asp | Pro | Asn | Leu | Ala | Pro | Glu | Glu |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Ile | Leu | Met | Ser | Glu | Ser | Gln | Glu | Arg | Met | Ala | Ala | Val | Val | Arg | Pro |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Asp | Gln | Leu | Asp | Arg | Phe | Met | Glu | Ile | Cys | Ala | His | Trp | Gly | Val | Ala |
|     | 115 |     |     |     |     |     | 120 |     |     |     | 125 |     |     |     |     |
| Ala | Thr | Val | Ile | Gly | Glu | Val | Thr | Asp | Thr | Gly | Arg | Leu | His | Ile | Asp |
|     | 130 |     |     |     |     | 135 |     |     |     | 140 |     |     |     |     |     |
| Trp | Gln | Gly | Glu | Arg | Ile | Val | Asp | Val | Asp | Pro | Arg | Thr | Val | Ala | His |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Asp | Gly | Pro | Val | Leu | Asp | Met | Pro | Ala | Ala | Arg | Pro | Trp | Trp | Ile | Asp |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Glu | Leu | Asn | Glu | Asn | Asp | Ala | Asn | Ala |     |     |     |     |     |     |     |
|     |     | 180 |     |     |     |     | 185 |     |     |     |     |     |     |     |     |

<210> 1561  
 <211> 466  
 <212> DNA  
 <213> Homo sapiens

<400> 1561  
 acgcgtgaaa ggtttgagag aagagagatg ccgctattga atctgctgga gttttacatc  
 60  
 ccaagatgaa gacagcattc agaattgatg tgatttcctt gaatgtggct taggaaatgt  
 120  
 ggacacttaa aactctcact tgaaattggg cacaggtttg atgtagagat aaggacgggg  
 180  
 tgcggaatgg agaccattt tgtcattgat tcatctgacc gataaggcca tagtgcagtt  
 240  
 aggtgatatt cgaaagcttc tttgatgctc tttatgtata tgttggaagg aactaccagg  
 300  
 cgttgcttta aattcccaat gtgttgtttc gttactacta atttaatacc gtaagctcta  
 360  
 ggtaaagtcc catgttggtg aactctgact gttctctttg gaattgaacg ttttgcattc  
 420  
 tcctcctgtg gctttaggtc tgacattgta tttgacctt actagt  
 466

<210> 1562  
 <211> 130  
 <212> PRT  
 <213> Homo sapiens

<400> 1562  
 Met Ser Asp Leu Lys Pro Gln Glu Glu Asp Ala Lys Arg Ser Ile Pro  
 1 5 10 15  
 Lys Arg Thr Val Arg Val Gln Gln His Gly Thr Leu Pro Arg Ala Tyr  
 20 25 30  
 Gly Ile Lys Leu Val Val Thr Lys Gln His Ile Gly Asn Leu Lys Gln  
 35 40 45  
 Arg Leu Val Val Pro Ser Asn Ile Tyr Ile Lys Ser Ile Lys Glu Ala  
 50 55 60  
 Phe Glu Tyr His Leu Thr Ala Leu Trp Pro Tyr Arg Ser Asp Glu Ser  
 65 70 75 80  
 Met Thr Lys Trp Val Ser Ile Pro His Pro Val Leu Ile Ser Thr Ser  
 85 90 95  
 Asn Leu Cys Pro Ile Ser Ser Glu Ser Phe Lys Cys Pro His Phe Leu  
 100 105 110  
 Ser His Ile Gln Gly Asn His Ile Asn Ser Glu Cys Cys Leu His Leu  
 115 120 125  
 Gly Met  
 130

<210> 1563  
 <211> 434  
 <212> DNA  
 <213> Homo sapiens

<400> 1563

ctgggggggtg tggtcggcct gctgtcgggtg tacttgccgc gttggctgca tgaaacaccg  
 60  
 atcttcgctg agatgcagca gcgcaaaacc ctggctgccg agttgccatt gcgcgcggta  
 120  
 ttgcgtgacc accgtggcgc catcgtgctg tcgatgctgt tgacgtgggt gctgtcggcg  
 180  
 ggtgtgggtg tggtcacct gatgaccccg accgtgctgc aaaccgtcta ccacttcagc  
 240  
 ccgacgggtg cgctgcaagc caacagcctg gcgatcgta cgctgagcct gggctgcatt  
 300  
 gcgtccggcg cgctggctga ccgttttggg gccggtcgcg ttttggtcac cggttggcgt  
 360  
 tgctgtggc cacttcctgg acgctgtatc acagcctgat ggcccagacg gaatggtga  
 420  
 ataagtgtac gcgt  
 434

<210> 1564  
 <211> 132  
 <212> PRT  
 <213> Homo sapiens

<400> 1564  
 Leu Gly Gly Val Phe Gly Leu Leu Ser Val Tyr Leu Pro Arg Trp Leu  
 1 5 10 15  
 His Glu Thr Pro Ile Phe Ala Glu Met Gln Gln Arg Lys Thr Leu Ala  
 20 25 30  
 Ala Glu Leu Pro Leu Arg Ala Val Leu Arg Asp His Arg Gly Ala Ile  
 35 40 45  
 Val Leu Ser Met Leu Leu Thr Trp Leu Leu Ser Ala Gly Val Val Val  
 50 55 60  
 Val Ile Leu Met Thr Pro Thr Val Leu Gln Thr Val Tyr His Phe Ser  
 65 70 75 80  
 Pro Thr Val Ala Leu Gln Ala Asn Ser Leu Ala Ile Val Thr Leu Ser  
 85 90 95  
 Leu Gly Cys Ile Ala Ser Gly Ala Leu Ala Asp Arg Phe Gly Ala Gly  
 100 105 110  
 Arg Val Leu Val Thr Gly Trp Arg Cys Cys Trp Pro Leu Pro Gly Arg  
 115 120 125  
 Cys Ile Thr Ala  
 130

<210> 1565  
 <211> 373  
 <212> DNA  
 <213> Homo sapiens

<400> 1565  
 ccattggtcgt agcccttggt tcaacaagag ccgtctactg acgctaacc accatgagcc  
 60  
 agagggtgag cggttctggc acctactgga ccatgaaagc aataaagagg acaagggagc  
 120  
 ctgcattcgg ccatttcttc ccaagaatca ccataaagggt tgtcaaaatc aaggaccctg  
 180



atccggtgat tctcgaagtc atcgatgagc agaacaagtt tacccccgag ggagaaaagc  
 240  
 ggggtggtgct cttgatgctc gacaacctct accgtcccag tacccaccgt gcattggcga  
 300  
 acggggggcgt cccttatctg cggtcgaaga gtgtcactgt tgacctcgta gacagccggg  
 360  
 acaacacggg tac  
 373

<210> 1566  
 <211> 106  
 <212> PRT  
 <213> Homo sapiens

<400> 1566  
 Met Ser Gln Arg Val Ser Gly Ser Gly Thr Tyr Trp Thr Met Lys Ala  
 1 5 10 15  
 Ile Lys Arg Thr Arg Glu Pro Ala Phe Gly His Phe Phe Pro Arg Ile  
 20 25 30  
 Thr Ile Lys Val Val Lys Ile Lys Asp Pro Asp Pro Val Ile Leu Glu  
 35 40 45  
 Val Ile Asp Glu Gln Asn Lys Phe Thr Pro Glu Gly Glu Lys Arg Val  
 50 55 60  
 Val Leu Leu Met Leu Asp Asn Leu Tyr Arg Pro Ser Thr His Arg Ala  
 65 70 75 80  
 Leu Ala Asn Gly Gly Val Pro Tyr Leu Arg Ser Lys Ser Val Thr Val  
 85 90 95  
 Asp Leu Val Asp Ser Arg Asp Asn Thr Gly  
 100 105

<210> 1567  
 <211> 917  
 <212> DNA  
 <213> Homo sapiens

<400> 1567  
 agcttttttcg accgctgaag gagggtggata cccgctcccc agacactccc tttctagggg  
 60  
 aagccgctgc actcctgggg gacccagttt gatgcctcca ggaggataag tctgaagccg  
 120  
 ggttggaag ggagcggaga ggcccaaaca gacgagcagg cagcgccctc tgctggcacc  
 180  
 ctggagacag cttcggctgc gggggccctg ctttctagtc ctccccagct ttcaggacac  
 240  
 cttgacaacc tggggtcctt gcagaagtgg cccggctgtc cccaagtct cctgaagcta  
 300  
 tctgggtagg gtgggaggca gtgctgtgag ccacaaatgc aaagcagagg ggacagatgt  
 360  
 tgggactcaa agacatgagg tagagctggc cccatgggta ggtgccacca ccagagccca  
 420  
 tgaggcttcg tgttctagaa ggtggtgggt tagtgccgca ctgagggcgt gtccgggagg  
 480  
 gagcatgtgt caccagggct caggaaacag catgagtcac gacgcggggg tgtttaaggc  
 540

attcgtgccca cagcggggac ctccggagcta tgccttgata aggcaagtga gggtacatgt  
 600  
 acgatgatgc gggttgtgct gcagactgga aaaaagcagg ggctttgtcc tctcctgacc  
 660  
 ccctcacact ctgccttcac ggtaggctcc tgagaggggg gtctccaagg aggggtgtcag  
 720  
 tactgcagct tcagctggcg tggatgggggt gcttacagga gcagcagggc tgaggagat  
 780  
 gacagcagta cgaatcgtgg ctctcctgag gcctgggttt cctcatatgt aaaatggggg  
 840  
 ttgcattaga ccataccctt ggctgtgtt taggcaaata gggatgaaag tggggccaag  
 900  
 ggctgaagag ctgggtc  
 917

<210> 1568  
 <211> 113  
 <212> PRT  
 <213> Homo sapiens

<400> 1568  
 Met Gly Pro Ala Leu Pro His Val Phe Glu Ser Gln His Leu Ser Pro  
 1 5 10 15  
 Leu Leu Cys Ile Cys Gly Ser Gln His Cys Leu Pro Pro Tyr Pro Asp  
 20 25 30  
 Ser Phe Arg Arg Leu Gly Gly Gln Pro Gly His Phe Cys Arg Asp Pro  
 35 40 45  
 Arg Leu Ser Arg Cys Pro Glu Ser Trp Gly Gly Leu Glu Gly Arg Gly  
 50 55 60  
 Pro Ala Ala Glu Ala Val Ser Arg Val Pro Ala Glu Gly Ala Ala Cys  
 65 70 75 80  
 Cys Ser Val Trp Ala Ser Pro Leu Pro Ser Gln Pro Gly Phe Arg Leu  
 85 90 95  
 Ile Leu Leu Glu Ala Ser Asn Trp Val Pro Gln Glu Cys Ser Gly Phe  
 100 105 110  
 Pro

<210> 1569  
 <211> 379  
 <212> DNA  
 <213> Homo sapiens

<400> 1569  
 ggagggcctg tgattctact gcaggcaggc acccccaca acctcacatg ccgggccttc  
 60  
 aatgcgaagc ctgctgccac catcatctgg ttccgggacg ggacgcagca ggagggcgct  
 120  
 gtggccagca cggaattgct gaaggatggg aagagggaga ccaccgtgag ccaactgctt  
 180  
 attaacccca cggacctgga catagggcgt gtcttcactt gccgaagcat gaacgaagcc  
 240  
 atccctagtg gcaaggagac ttccatcgag ctggatgtgc accaccctcc tacagtgacc  
 300

ctgtccattg agccacagac ggtgcaggag ggtgagcgtg ttgtctttac ctgccaggcc

360

acagccaacc cggagatct

379

<210> 1570

<211> 126

<212> PRT

<213> Homo sapiens

<400> 1570

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Gly | Pro | Val | Ile | Leu | Leu | Gln | Ala | Gly | Thr | Pro | His | Asn | Leu | Thr |
| 1   |     |     | 5   |     |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Cys | Arg | Ala | Phe | Asn | Ala | Lys | Pro | Ala | Ala | Thr | Ile | Ile | Trp | Phe | Arg |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Asp | Gly | Thr | Gln | Gln | Glu | Gly | Ala | Val | Ala | Ser | Thr | Glu | Leu | Leu | Lys |
|     | 35  |     |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |
| Asp | Gly | Lys | Arg | Glu | Thr | Thr | Val | Ser | Gln | Leu | Leu | Ile | Asn | Pro | Thr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Asp | Leu | Asp | Ile | Gly | Arg | Val | Phe | Thr | Cys | Arg | Ser | Met | Asn | Glu | Ala |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Ile | Pro | Ser | Gly | Lys | Glu | Thr | Ser | Ile | Glu | Leu | Asp | Val | His | His | Pro |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Pro | Thr | Val | Thr | Leu | Ser | Ile | Glu | Pro | Gln | Thr | Val | Gln | Glu | Gly | Glu |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Arg | Val | Val | Phe | Thr | Cys | Gln | Ala | Thr | Ala | Asn | Pro | Glu | Ile |     |     |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

<210> 1571

<211> 357

<212> DNA

<213> Homo sapiens

<400> 1571

tgcgcacttt tccgctcccg atgggtcccc tggncgttga tcatgccccca gatgttcac  
60  
atcggcatct tcttcttctt gccaaagggc caagccgtgc tccagtcttt ccagatggaa  
120  
gatgcgttcg gcatgtcgac cgaatgggtc ggattggaca acttccgcaa cctgctggat  
180  
gacccacct acctgaattc cttccagcgc accgccgtgt tctcgttgct ggtggcaggg  
240  
gtcgggatcg ccgtgtcact gggctctggcg atctttgccg accccatcac tccgtcgcca  
300  
tgtgtacaag acacactgct gatcgtgccc tacgccgtgg cacccatgat cgccggc  
357

<210> 1572

<211> 119

<212> PRT

<213> Homo sapiens

<400> 1572.

Cys Ala Leu Phe Arg Ser Arg Trp Val Pro Trp Xaa Leu Ile Met Pro

```

      1           5           10           15
Gln Met Phe Ile Ile Gly Ile Phe Phe Phe Leu Pro Ser Gly Gln Ala
      20           25           30
Val Leu Gln Ser Phe Gln Met Glu Asp Ala Phe Gly Met Ser Thr Glu
      35           40           45
Trp Val Gly Leu Asp Asn Phe Arg Asn Leu Leu Asp Asp Pro Thr Tyr
      50           55           60
Leu Asn Ser Phe Gln Arg Thr Ala Val Phe Ser Val Leu Val Ala Gly
      65           70           75           80
Val Gly Ile Ala Val Ser Leu Gly Leu Ala Ile Phe Ala Asp Pro Ile
      85           90           95
Thr Pro Ser Pro Cys Val Gln Asp Thr Leu Leu Ile Val Pro Tyr Ala
      100           105           110
Val Ala Pro Met Ile Ala Gly
      115

```

&lt;210&gt; 1573

&lt;211&gt; 337

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1573

```

gaattcccat tgtcatctga ttccatgtct ggaaagaggg aagagagaca tcatgcagaa
60
tattgtacag attttggaaat cggtacagtt gaaatgggaa ctttttcaga gctggacaga
120
cttttcaagg ctccatcttt ctaataaaact ggccattttt ggaattggtt ataacacccg
180
ttggaaagag gatatccggt accattatgc tgagatcagc tcccaggtgc cccttggcaa
240
gcgacttcgg gagtacttca actctgagaa gctgaagga cggatcatta tgacccgagt
300
gcagaaaatg aactggaaaa atgtttacta caaattt
337

```

&lt;210&gt; 1574

&lt;211&gt; 95

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1574

```

Met Gln Asn Ile Val Gln Ile Leu Glu Ser Val Gln Leu Lys Trp Glu
      1           5           10           15
Leu Phe Gln Ser Trp Thr Asp Phe Ser Arg Leu His Leu Ser Asn Lys
      20           25           30
Leu Ala Ile Phe Gly Ile Gly Tyr Asn Thr Arg Trp Lys Glu Asp Ile
      35           40           45
Arg Tyr His Tyr Ala Glu Ile Ser Ser Gln Val Pro Leu Gly Lys Arg
      50           55           60
Leu Arg Glu Tyr Phe Asn Ser Glu Lys Pro Glu Gly Arg Ile Ile Met
      65           70           75           80
Thr Arg Val Gln Lys Met Asn Trp Lys Asn Val Tyr Tyr Lys Phe
      85           90           95

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<210> 1576  
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<400> 1576  
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 Val Gly Gln Ser Asp Met Pro Val Asp Gln Ala Arg Ala Ile Leu Gly  
 35 40 45  
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 50 55 60  
 Ala Ala Leu Ser Gln Gly Arg Asp Ile Val Asp Tyr Leu Gly Val Gly  
 65 70 75 80  
 Ala Leu His Gly Thr Gly Thr Lys Pro Glu Ala Gly Glu Leu Gly Leu  
 85 90 95  
 Ala Glu Ile Arg Asp Val Val Asn Ala Ser Pro Trp Pro Val Cys Val  
 100 105 110  
 Ile Gly Gly Val Ser Ala Ser Asp Ala Gln Asp Val Ala Arg Val Gly  
 115 120 125  
 Cys Asp Gly Leu Ser Val Val Ser Ala Ile Cys Arg Ser Thr Asp Pro  
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<210> 1577  
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&lt;400&gt; 1577

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 287

&lt;210&gt; 1578

&lt;211&gt; 95

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1578

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Val | Leu | Gln | Arg | Pro | Ile | Ser | Ala | Leu | Arg | Met | Leu | Ile | Gly | Gly |
| 1   |     |     | 5   |     |     |     |     |     | 10  |     |     |     | 15  |     |     |
| Pro | Leu | Arg | Ile | Pro | His | Pro | Ala | Gly | Leu | Arg | Thr | Val | Ala | Leu | Glu |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     | 30  |     |     |     |
| Pro | Gly | Val | Ala | His | Ala | Arg | Thr | Leu | Arg | Val | Ala | Gly | Ala | Gly | Phe |
|     |     | 35  |     |     |     | 40  |     |     |     | 45  |     |     |     |     |     |
| Pro | Ala | Arg | Gly | Gln | Arg | Ala | Ala | Gly | Asp | Leu | Val | Ile | Glu | Leu | Glu |
|     | 50  |     |     |     |     | 55  |     |     | 60  |     |     |     |     |     |     |
| Pro | Met | Leu | Pro | Gln | Ala | Pro | Asp | Lys | Gln | Leu | His | Ala | Leu | Ile | Glu |
| 65  |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |     |
| Gln | Leu | Asp | Val | Ala | Leu | Gly | Lys | Ser | Ala | Thr | Arg | His | Phe | Pro |     |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |

&lt;210&gt; 1579

&lt;211&gt; 2829

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1579

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2040  
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<210> 1580

<211> 824

<212> PRT

<213> Homo sapiens

<400> 1580

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | Leu | Leu | Gly | Asp | Pro | Leu | Gln | Ala | Leu | Pro | Pro | Ser | Ala | Ala |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Pro | Thr | Gly | Pro | Leu | Leu | Ala | Pro | Pro | Ala | Gly | Ala | Thr | Leu | Asn | Arg |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Leu | Arg | Glu | Pro | Leu | Leu | Arg | Arg | Leu | Ser | Glu | Leu | Leu | Asp | Gln | Ala |
|     |     | 35  |     |     |     |     | 40  |     |     |     | 45  |     |     |     |     |
| Pro | Glu | Gly | Arg | Gly | Trp | Arg | Arg | Leu | Ala | Glu | Leu | Ala | Gly | Ser | Arg |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Gly | Arg | Leu | Arg | Leu | Ser | Cys | Leu | Asp | Leu | Glu | Gln | Cys | Ser | Leu | Lys |
| 65  |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     | 80  |     |
| Val | Leu | Glu | Pro | Glu | Gly | Ser | Pro | Ser | Leu | Cys | Leu | Leu | Lys | Leu | Met |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Gly | Glu | Lys | Gly | Cys | Thr | Val | Thr | Glu | Leu | Ser | Asp | Phe | Leu | Gln | Ala |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Met | Glu | His | Thr | Glu | Val | Leu | Gln | Leu | Leu | Ser | Pro | Pro | Gly | Ile | Lys |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Ile | Thr | Val | Asn | Pro | Glu | Ser | Lys | Ala | Val | Leu | Ala | Gly | Gln | Phe | Val |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Lys | Leu | Cys | Cys | Arg | Ala | Thr | Gly | His | Pro | Phe | Val | Gln | Tyr | Gln | Trp |
| 145 |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     | 160 |     |
| Phe | Lys | Met | Asn | Lys | Glu | Ile | Pro | Asn | Gly | Asn | Thr | Ser | Glu | Leu | Ile |



|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|
|     |     |     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     |  | 175 |
| Phe | Asn | Ala | Val | His | Val | Lys | Asp | Ala | Gly | Phe | Tyr | Val | Cys | Arg | Val |  |     |
|     |     |     |     |     | 180 |     |     |     |     |     |     |     |     |     |     |  | 190 |
| Asn | Asn | Asn | Phe | Thr | Phe | Glu | Phe | Ser | Gln | Trp | Ser | Gln | Leu | Asp | Val |  |     |
|     |     |     |     |     | 195 |     |     |     |     | 200 |     |     |     |     |     |  | 205 |
| Cys | Asp | Ile | Pro | Glu | Ser | Phe | Gln | Arg | Ser | Val | Asp | Gly | Val | Ser | Glu |  |     |
|     |     |     |     |     | 210 |     |     |     |     |     |     |     |     |     |     |  | 220 |
| Ser | Lys | Leu | Gln | Ile | Cys | Val | Glu | Pro | Thr | Ser | Gln | Lys | Leu | Met | Pro |  |     |
| 225 |     |     |     |     | 230 |     |     |     |     |     |     |     |     |     |     |  | 240 |
| Gly | Ser | Thr | Leu | Val | Leu | Gln | Cys | Val | Ala | Val | Gly | Ser | Pro | Ile | Pro |  |     |
|     |     |     |     |     | 245 |     |     |     |     |     |     |     |     |     |     |  | 255 |
| His | Tyr | Gln | Trp | Phe | Lys | Asn | Glu | Leu | Pro | Leu | Thr | His | Glu | Thr | Lys |  |     |
|     |     |     |     |     | 260 |     |     |     |     |     |     |     |     |     |     |  | 270 |
| Lys | Leu | Tyr | Met | Val | Pro | Tyr | Ala | Asp | Leu | Glu | His | Gln | Gly | Thr | Tyr |  |     |
|     |     |     |     |     | 275 |     |     |     |     |     |     |     |     |     |     |  | 285 |
| Trp | Cys | His | Val | Tyr | Asn | Asp | Arg | Asp | Ser | Gln | Asp | Ser | Lys | Lys | Val |  |     |
|     |     |     |     |     | 290 |     |     |     |     |     |     |     |     |     |     |  | 300 |
| Glu | Ile | Ile | Ile | Gly | Arg | Thr | Asp | Glu | Ala | Val | Glu | Cys | Thr | Glu | Asp |  |     |
| 305 |     |     |     |     | 310 |     |     |     |     |     |     |     |     |     |     |  | 320 |
| Glu | Leu | Asn | Asn | Leu | Gly | His | Pro | Asp | Asn | Lys | Glu | Gln | Thr | Thr | Asp |  |     |
|     |     |     |     |     | 325 |     |     |     |     |     |     |     |     |     |     |  | 335 |
| Gln | Pro | Leu | Ala | Lys | Asp | Lys | Val | Ala | Leu | Leu | Ile | Gly | Asn | Met | Asn |  |     |
|     |     |     |     |     | 340 |     |     |     |     |     |     |     |     |     |     |  | 350 |
| Tyr | Arg | Glu | His | Pro | Lys | Leu | Lys | Ala | Pro | Leu | Val | Asp | Val | Tyr | Glu |  |     |
|     |     |     |     |     | 355 |     |     |     |     |     |     |     |     |     |     |  | 365 |
| Leu | Thr | Asn | Leu | Leu | Arg | Gln | Leu | Asp | Phe | Lys | Val | Val | Ser | Leu | Leu |  |     |
|     |     |     |     |     | 370 |     |     |     |     |     |     |     |     |     |     |  | 380 |
| Asp | Leu | Thr | Glu | Tyr | Glu | Met | Arg | Asn | Ala | Val | Asp | Glu | Phe | Leu | Leu |  |     |
| 385 |     |     |     |     | 390 |     |     |     |     |     |     |     |     |     |     |  | 400 |
| Leu | Leu | Asp | Lys | Gly | Val | Tyr | Gly | Leu | Leu | Tyr | Tyr | Ala | Gly | His | Gly |  |     |
|     |     |     |     |     | 405 |     |     |     |     |     |     |     |     |     |     |  | 415 |
| Tyr | Glu | Asn | Phe | Gly | Asn | Ser | Phe | Met | Val | Pro | Val | Asp | Ala | Pro | Asn |  |     |
|     |     |     |     |     | 420 |     |     |     |     |     |     |     |     |     |     |  | 430 |
| Pro | Tyr | Arg | Ser | Glu | Asn | Cys | Leu | Cys | Val | Gln | Asn | Ile | Leu | Lys | Leu |  |     |
|     |     |     |     |     | 435 |     |     |     |     |     |     |     |     |     |     |  | 445 |
| Met | Gln | Glu | Lys | Glu | Thr | Gly | Leu | Asn | Val | Phe | Leu | Leu | Asp | Met | Cys |  |     |
|     |     |     |     |     | 450 |     |     |     |     |     |     |     |     |     |     |  | 460 |
| Arg | Lys | Arg | Asn | Asp | Tyr | Asp | Asp | Thr | Ile | Pro | Ile | Leu | Asp | Ala | Leu |  |     |
| 465 |     |     |     |     | 470 |     |     |     |     |     |     |     |     |     |     |  | 480 |
| Lys | Val | Thr | Ala | Asn | Ile | Val | Phe | Gly | Tyr | Ala | Thr | Cys | Gln | Gly | Ala |  |     |
|     |     |     |     |     | 485 |     |     |     |     |     |     |     |     |     |     |  | 495 |
| Glu | Ala | Phe | Glu | Ile | Gln | His | Ser | Gly | Leu | Ala | Asn | Gly | Ile | Phe | Met |  |     |
|     |     |     |     |     | 500 |     |     |     |     |     |     |     |     |     |     |  | 510 |
| Lys | Phe | Leu | Lys | Asp | Arg | Leu | Leu | Glu | Asp | Lys | Lys | Ile | Thr | Val | Leu |  |     |
|     |     |     |     |     | 515 |     |     |     |     |     |     |     |     |     |     |  | 525 |
| Leu | Asp | Glu | Val | Ala | Glu | Asp | Met | Gly | Lys | Cys | His | Leu | Thr | Lys | Gly |  |     |
|     |     |     |     |     | 530 |     |     |     |     |     |     |     |     |     |     |  | 540 |
| Lys | Gln | Ala | Leu | Glu | Ile | Arg | Ser | Ser | Leu | Ser | Glu | Lys | Arg | Ala | Leu |  |     |
| 545 |     |     |     |     | 550 |     |     |     |     |     |     |     |     |     |     |  | 560 |
| Thr | Asp | Pro | Ile | Gln | Gly | Thr | Glu | Tyr | Ser | Ala | Glu | Ser | Leu | Val | Arg |  |     |
|     |     |     |     |     | 565 |     |     |     |     |     |     |     |     |     |     |  | 575 |
| Asn | Leu | Gln | Trp | Ala | Lys | Ala | His | Glu | Leu | Pro | Glu | Ser | Met | Cys | Leu |  |     |
|     |     |     |     |     | 580 |     |     |     |     |     |     |     |     |     |     |  | 590 |
| Lys | Phe | Asp | Cys | Gly | Val | Gln | Ile | Gln | Leu | Gly | Phe | Ala | Ala | Glu | Phe |  |     |

595 600 605  
 Ser Asn Val Met Ile Ile Tyr Thr Ser Ile Val Tyr Lys Pro Pro Glu  
 610 615 620  
 Ile Ile Met Cys Asp Ala Tyr Val Thr Asp Phe Pro Leu Asp Leu Asp  
 625 630 635 640  
 Ile Asp Pro Lys Asp Ala Asn Lys Gly Thr Pro Glu Glu Thr Gly Ser  
 645 650 655  
 Tyr Leu Val Ser Lys Asp Leu Pro Lys His Cys Leu Tyr Thr Arg Leu  
 660 665 670  
 Ser Ser Leu Gln Lys Leu Lys Glu His Leu Val Phe Thr Val Cys Leu  
 675 680 685  
 Ser Tyr Gln Tyr Ser Gly Leu Glu Asp Thr Val Glu Asp Lys Gln Glu  
 690 695 700  
 Val Asn Val Gly Lys Pro Leu Ile Ala Lys Leu Asp Met His Arg Gly  
 705 710 715 720  
 Leu Gly Arg Lys Thr Cys Phe Gln Thr Cys Leu Met Ser Asn Gly Pro  
 725 730 735  
 Tyr Gln Ser Ser Ala Ala Thr Ser Gly Gly Ala Gly His Tyr His Ser  
 740 745 750  
 Leu Gln Asp Pro Phe His Gly Val Tyr His Ser His Pro Gly Asn Pro  
 755 760 765  
 Ser Asn Val Thr Pro Ala Asp Ser Cys His Cys Ser Arg Thr Pro Asp  
 770 775 780  
 Ala Phe Ile Ser Ser Phe Ala His His Ala Ser Cys His Phe Ser Arg  
 785 790 795 800  
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 Asp Arg Leu Arg Ile Ser Glu Lys  
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&lt;210&gt; 1581

&lt;211&gt; 426

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1581

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&lt;210&gt; 1582

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 <212> PRT  
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<400> 1582  
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 35 40 45  
 Lys Glu Lys Phe Glu Ser His Tyr Pro Gly Asp Phe Ile Cys Glu Ala  
 50 55 60  
 Ile Asp Gln Thr Arg Gly Trp Phe Tyr Thr Met Met Ala Val Gly Thr  
 65 70 75 80  
 Leu Val Phe Asp Glu Ser Ser Tyr Arg Asn Val Leu Cys Leu Gly His  
 85 90 95  
 Ile Leu Ala Glu Asp Gly Arg Lys Met Ser Lys His Leu Gly Asn Ile  
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 Trp Phe Met Ala Ala Asp Gly Ser Pro Trp Ser Ala Arg Arg  
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<210> 1583  
 <211> 450  
 <212> DNA  
 <213> Homo sapiens

<400> 1583  
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 180  
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 360  
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<210> 1584  
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 <212> PRT  
 <213> Homo sapiens

<400> 1584  
 Xaa Arg Val Lys Gly Tyr Gly Asp Gly Ser Gly Ser Lys Glu Gly Phe

```

      1           5           10           15
Arg Asp Gly Leu Gly Gly Ser Glu Glu Met Gly Ser Met Asp Glu Ala
      20           25           30
Gly Tyr Arg Lys Asp Leu Gly Ala Pro Lys Gly Ile Gly Ser Gly Ser
      35           40           45
Lys Ala Gly Phe Arg Asp Gly Leu Gly Ser Ser Gly Glu Met Gly Ser
      50           55           60
Met Asp Glu Ala Asp Tyr Arg Lys Asp Leu Gly Ala Pro Glu Glu Met
      65           70           75           80
Gly Ser Gly Ser Tyr Thr Asp Tyr Arg Asn Gly Leu Gly Ser Ser Gly
      85           90           95
Lys Ile Ser Ser Gly Asp Glu Ala Gly Tyr Lys Asn Val Leu Gly Gly
      100          105          110
Ser Gly Arg Asn Pro Leu Gly Ser Glu Ala Gly Ser Arg Gly Ser Leu
      115          120          125
Glu Asp Ser Gly Tyr Ile Leu Ser Trp Asn Glu Ala Gly Ser Arg Gln
      130          135          140
Gly Phe Gly Gly Thr Ser
      145          150

```

&lt;210&gt; 1585

&lt;211&gt; 596

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1585

```

tgatcatctg taattcttgt ccgtgggcgt ttgaactgag aatgtcttaa gaagttggga
60
tctaataccga gctgctgctg gcaaagttgg gtgaggtctg cagagagtgc gtccatctgt
120
ggcagctgca gggcaagctg gggaggaagc gcagggtggt gcacaggttg catcataatg
180
gaaggaaaga gcggcaggtc cagagaaacc ggcctctccc aaaaagtatt caaacactgg
240
tttagaaata cgcttttttaa ggaacgacag agaaataaag attcaccata caacttcagt
300
aaccctccta taacggttttt agaagatatc agaattgatc cacagcccac ctctttagaa
360
cattacaaat ctgatgcac attcagtaaa aggtcttcta gaacgagatt tactgactac
420
cagcttaggg ttctgcaaga cttttttgac acaaacgctt acccaaaaga tgatgaaata
480
gaacaactct ccaactgttct caatctgcct acccggttga ttgttgatg gttccagaat
540
gctcgtcaga aagcacgaaa gagttatgag aatcaagcag aaacccttc acgcgt
596

```

&lt;210&gt; 1586

&lt;211&gt; 139

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1586

```

Met Glu Gly Lys Ser Gly Arg Ser Arg Glu Thr Gly Leu Ser Gln Lys

```

```

      1             5             10             15
Val Ile Lys His Trp Phe Arg Asn Thr Leu Phe Lys Glu Arg Gln Arg
      20             25             30
Asn Lys Asp Ser Pro Tyr Asn Phe Ser Asn Pro Pro Ile Thr Val Leu
      35             40             45
Glu Asp Ile Arg Ile Asp Pro Gln Pro Thr Ser Leu Glu His Tyr Lys
      50             55             60
Ser Asp Ala Ser Phe Ser Lys Arg Ser Ser Arg Thr Arg Phe Thr Asp
      65             70             75             80
Tyr Gln Leu Arg Val Leu Gln Asp Phe Phe Asp Thr Asn Ala Tyr Pro
      85             90             95
Lys Asp Asp Glu Ile Glu Gln Leu Ser Thr Val Leu Asn Leu Pro Thr
      100            105            110
Arg Val Ile Val Val Trp Phe Gln Asn Ala Arg Gln Lys Ala Arg Lys
      115            120            125
Ser Tyr Glu Asn Gln Ala Glu Thr Pro Ser Arg
      130            135

```

&lt;210&gt; 1587

&lt;211&gt; 501

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1587

```

tgtacacaca gtgatttggg gtcctttttc ctaaaacagc ttctttatca ggactttgga
60
attctgggtg agatagaaac actgaaaaca gggcggaagt tttttcttct ggcttcttag
120
tccacggagg gctcagcgtg gagaggatat gccgtggcat tctccctggg agaccacaca
180
tgttcccgac agctcagacc ccagaccgca tgtgtcctg acagctcaga cccagaccg
240
cgcggtgctc tgacagctca gaccccagac cgcaggtgct cccgacagct cagaccccag
300
accgcggtg ctcctgacag ctcagacccc agaccgcgcg tgctcccgac agctcagacc
360
ccagaccgcg ggtgtcctg acagctcaga cccagaccg cgcggtgctc cgacagctca
420
gaccccagac cgcggtgct cctgacagct cagaccccag accgcggtg ctcctgacag
480
ctcagacccc agaccacgcg t
501

```

&lt;210&gt; 1588

&lt;211&gt; 86

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1588

```

Ser Thr Glu Gly Ser Ala Trp Arg Gly Tyr Ala Val Ala Phe Ser Leu
      1             5             10             15
Gly Asp His Thr Cys Ser Arg Gln Leu Arg Pro Gln Thr Ala Cys Ala
      20             25             30
Pro Asp Ser Ser Asp Pro Arg Pro Arg Val Leu Leu Thr Ala Gln Thr

```

```

          35          40          45
Pro Asp Arg Arg Cys Ser Arg Gln Leu Arg Pro Gln Thr Ala Gly Ala
   50          55          60
Pro Asp Ser Ser Asp Pro Arg Pro Arg Val Leu Pro Thr Ala Gln Thr
   65          70          75          80
Pro Asp Arg Gly Cys Ser
          85

```

<210> 1589  
 <211> 407  
 <212> DNA  
 <213> Homo sapiens

```

<400> 1589
aagcttgctg gggacaccct ttttacgggg ctcgctgggg gaggagttac ctgcattgac
60
tccaccgggtt ccactaacgc cgacatggct gctttcgtgc gagcaggggg aacgtctttc
120
tgcctactcg ttgctgacca ccaagagggc gggcgtggac gggtcacgcg cagttggcag
180
gatgtccccg gtacgagttt ggcgatctca gcgttggtgc ccaatgatcg tccgtcgcag
240
gactgggggct ggctgtcgat ggttgcgggg ctcgctgttg tcaagggtcat caaggaggtc
300
ggtgggggctg accgttcccc agtgacgctg aagtggccca atgatgtgct cgtggatctg
360
gacactgacc agggcgggcaa agtgtgcgga attctctcag aacgcgt
407

```

<210> 1590  
 <211> 135  
 <212> PRT  
 <213> Homo sapiens

```

<400> 1590
Lys Leu Ala Gly Asp Thr Leu Phe Thr Gly Pro Arg Gly Gly Gly Val
 1          5          10          15
Thr Cys Ile Asp Ser Thr Gly Ser Thr Asn Ala Asp Met Ala Ala Phe
          20          25          30
Val Arg Ala Gly Gly Thr Ser Phe Cys Leu Leu Val Ala Asp His Gln
          35          40          45
Glu Gly Gly Arg Gly Arg Phe Thr Arg Ser Trp Gln Asp Val Pro Gly
          50          55          60
Thr Ser Leu Ala Ile Ser Ala Leu Val Pro Asn Asp Arg Pro Ser Gln
          65          70          75          80
Asp Trp Gly Trp Leu Ser Met Val Ala Gly Leu Ala Val Val Lys Val
          85          90          95
Ile Lys Glu Val Gly Gly Ala Asp Arg Ser Arg Val Thr Leu Lys Trp
          100          105          110
Pro Asn Asp Val Leu Val Asp Leu Asp Thr Asp Gln Gly Gly Lys Val
          115          120          125
Cys Gly Ile Leu Ser Glu Arg
          130          135

```

<210> 1591  
 <211> 424  
 <212> DNA  
 <213> Homo sapiens

<400> 1591  
 agatctctct ccctgagata acccaggctt tagaaccaaa gagctgagag accctgtccc  
 60  
 ttcagagagg cacttgcacc tagaggagtc tctgggaagc agatggggat atgggacaga  
 120  
 cgcacatctga aaaagcccc agatgcctcc ctatggagga cctcaccac ccacatcacc  
 180  
 agtagggagc ttgggactta ccctaaccac aggggggtga ctgttgctgt cctgcacag  
 240  
 aacgtccagc gagtcctgac tttccagccg ctgcgcttca tccaggagca cgtcctgac  
 300  
 cctgtctttg acctcagcgg cccagcagc ctggcccagc ctgtccagta ctcccttgac  
 360  
 tgtgggatcc ctggctgtc acgcccctga ggacccctcg gatctgtctc agcacgtgaa  
 420  
 attt  
 424

<210> 1592  
 <211> 95  
 <212> PRT  
 <213> Homo sapiens

<400> 1592  
 Met Gly Ile Trp Asp Arg Arg Ile Leu Lys Lys Pro Pro Asp Ala Ser  
 1 5 10 15  
 Leu Trp Arg Thr Ser Pro Thr His Ile Thr Ser Arg Glu Leu Gly Thr  
 20 25 30  
 Tyr Pro Asn His Arg Gly Val Thr Val Val Val Pro Ala Gln Asn Val  
 35 40 45  
 Gln Arg Val Leu Thr Phe Gln Pro Leu Arg Phe Ile Gln Glu His Val  
 50 55 60  
 Leu Ile Pro Val Phe Asp Leu Ser Gly Pro Ser Ser Leu Ala Gln Pro  
 65 70 75 80  
 Val Gln Tyr Ser Leu Asp Cys Gly Ile Pro Gly Cys Ser Arg Pro  
 85 90 95

<210> 1593  
 <211> 1678  
 <212> DNA  
 <213> Homo sapiens

<400> 1593  
 cttgaatcta aaataaatga aataaacaca gaaattaacc agttgattga aaagaaaatg  
 60  
 atgagaaaatg agcccattga aggcacaaactc tcaactgtata ggcaacaggc atctatcatt  
 120  
 tcccgtaaaa aagaagccaa agctgaggaa cttcaggagg ccaaggagaa gttagccagc  
 180

ctagagagag aagcatcagt aaagagaaat cagacccgtg aatttgatgg tactgaagtt  
240  
ttaaaggagg atgagttcaa acgatatgtc aataaacttc gaagcaagag tacagttttc  
300  
aaaaagaagc atcacataat agctgaactt aaagctgaat tcggtctttt gcagaggact  
360  
gaagaacttc ttaagcaacg tcatgaaaat attcaacaac aactgcaaac tatggaggag  
420  
aaaaagggta tatctggata tagttacacc caagaagagc tagaaagagt atctgcactg  
480  
aagagtgaag ttgatgaaat gaaaggacga acattggatg atatgtctga aatggtgaaa  
540  
aaactgtatt catttggtatc tgaaaagaag tcagctcttg cctcagttat aaaagagcta  
600  
cgacagtgc gtcaaaaata tcaagaactg acccaggagt gtgatgaaaa gaaatccag  
660  
tatgatagct gtgcagcagg cctcgaaagc aatcggtcca aattagaaca ggaagttaga  
720  
agactccgtg aagaatgtct tcaagaagaa agtagatacc attatacaaa ttgtatgatt  
780  
aagaacctag aagttcaact tcgtcgtgct actgatgaga tgaaggcata tatctcttct  
840  
gatcaacaag aaaaaagaaa ggcaattagg gaacagtata caaaaatac tgctgaacaa  
900  
gaaaaccttg gaaagaaact tcgggaaaaa caaaaagtta tacgagaaag tcatgggtcca  
960  
aatatgaaac aagcaaaaat gtggcgtgat ttggaacaat taatggaatg taagaacag  
1020  
tgctttctga aacaacaaag ccaaacttcc attggtcagg taattcagga ggggtgggag  
1080  
gaccggctaa tactgtgaat tcttgtgtca tcgtttgggg ttttacttga taccactagc  
1140  
tatagccta atctcataat gtatttcttt tttgaaactg atttgtttag cattttgttt  
1200  
tcagaagagc cattctttat taagttttca tagaaaataa tgtaaggta gatttagttt  
1260  
gaatgttttt tcatatgaaa aagaggcttt tattcttttc catagttag acatcactgg  
1320  
cgtcttctga gttttatgag acaggaaact aagtttacta tctgtaaatg taaacatatg  
1380  
tccattaaga aacatgtagt ttttttttag aatgtaataa cccagtggct tactgttttt  
1440  
cttaatctct tttaaaaaaa ctttagaaga atcttttagg aactaatatc tcttgttctg  
1500  
aagaaacatt tatctgacgt tcagcagttc ctacagtttt acttcagttt atttttcttc  
1560  
tgtaaatgc aagaaaattt aatattttga ctaacatgtc ttttctgttt gtatcattta  
1620  
aaggcaaata aacttggtac gtatttcata tctatttaaa aaatgaaaaa aaaaaaaa  
1678

&lt;210&gt; 1594

&lt;211&gt; 365

&lt;212&gt; PRT



&lt;213&gt; Homo sapiens

&lt;400&gt; 1594

Leu Glu Ser Lys Ile Asn Glu Ile Asn Thr Glu Ile Asn Gln Leu Ile  
 1 5 10 15  
 Glu Lys Lys Met Met Arg Asn Glu Pro Ile Glu Gly Lys Leu Ser Leu  
 20 25 30  
 Tyr Arg Gln Gln Ala Ser Ile Ile Ser Arg Lys Lys Glu Ala Lys Ala  
 35 40 45  
 Glu Glu Leu Gln Glu Ala Lys Glu Lys Leu Ala Ser Leu Glu Arg Glu  
 50 55 60  
 Ala Ser Val Lys Arg Asn Gln Thr Arg Glu Phe Asp Gly Thr Glu Val  
 65 70 75 80  
 Leu Lys Gly Asp Glu Phe Lys Arg Tyr Val Asn Lys Leu Arg Ser Lys  
 85 90 95  
 Ser Thr Val Phe Lys Lys Lys His His Ile Ile Ala Glu Leu Lys Ala  
 100 105 110  
 Glu Phe Gly Leu Leu Gln Arg Thr Glu Glu Leu Leu Lys Gln Arg His  
 115 120 125  
 Glu Asn Ile Gln Gln Gln Leu Gln Thr Met Glu Glu Lys Lys Gly Ile  
 130 135 140  
 Ser Gly Tyr Ser Tyr Thr Gln Glu Glu Leu Glu Arg Val Ser Ala Leu  
 145 150 155 160  
 Lys Ser Glu Val Asp Glu Met Lys Gly Arg Thr Leu Asp Asp Met Ser  
 165 170 175  
 Glu Met Val Lys Lys Leu Tyr Ser Leu Val Ser Glu Lys Lys Ser Ala  
 180 185 190  
 Leu Ala Ser Val Ile Lys Glu Leu Arg Gln Leu Arg Gln Lys Tyr Gln  
 195 200 205  
 Glu Leu Thr Gln Glu Cys Asp Glu Lys Lys Ser Gln Tyr Asp Ser Cys  
 210 215 220  
 Ala Ala Gly Leu Glu Ser Asn Arg Ser Lys Leu Glu Gln Glu Val Arg  
 225 230 235 240  
 Arg Leu Arg Glu Glu Cys Leu Gln Glu Glu Ser Arg Tyr His Tyr Thr  
 245 250 255  
 Asn Cys Met Ile Lys Asn Leu Glu Val Gln Leu Arg Arg Ala Thr Asp  
 260 265 270  
 Glu Met Lys Ala Tyr Ile Ser Ser Asp Gln Gln Glu Lys Arg Lys Ala  
 275 280 285  
 Ile Arg Glu Gln Tyr Thr Lys Asn Thr Ala Glu Gln Glu Asn Leu Gly  
 290 295 300  
 Lys Lys Leu Arg Glu Lys Gln Lys Val Ile Arg Glu Ser His Gly Pro  
 305 310 315 320  
 Asn Met Lys Gln Ala Lys Met Trp Arg Asp Leu Glu Gln Leu Met Glu  
 325 330 335  
 Cys Lys Lys Gln Cys Phe Leu Lys Gln Gln Ser Gln Thr Ser Ile Gly  
 340 345 350  
 Gln Val Ile Gln Glu Gly Gly Glu Asp Arg Leu Ile Leu  
 355 360 365

&lt;210&gt; 1595

&lt;211&gt; 559

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1595

accggtcccc ctcacaggcc cacacctgct tctcctcctg gggcagggca gcctgggtggg  
60  
gcatggcccg ggagccgccc acttggcgag gaacaggctc catagcgacc tcagaacact  
120  
gggtgctgggg ccagccagg gagagcatct tcccgtggg accttccccg gggcggtca  
180  
tcccttgag atgtagggg cagctgagat ggtggcgcc ccattcctgc tgttcgccag  
240  
cctgggctgg ggggtactagg atcacccttg ggctgatgag gagcccgggt cttgggcagt  
300  
taccaagtgg ggggtcacag tctggaaagt ggtggaacca agggagcggc ctcgcccagg  
360  
ccacactctc aaatactggc cctcgacaaa aggcagctgg gctctcaaga cagggccacc  
420  
tcctctctgc tgggcccgcg ccggtggaga gcaagtggga actgacccta tcttctgtcc  
480  
cagcttgag agccagcatc aaggtcaggc ctcacttgcc caagaaagag gagtgaggag  
540  
gcccactgga ggaacgcgt  
559

&lt;210&gt; 1596

&lt;211&gt; 166

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1596

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Leu | Ala | Leu | Gln | Ala | Gly | Thr | Glu | Asp | Arg | Val | Ser | Ser | His | Leu |
| 1   |     |     | 5   |     |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Leu | Ser | Thr | Gly | Ala | Gly | Pro | Ala | Glu | Arg | Arg | Trp | Pro | Cys | Leu | Glu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ser | Pro | Ala | Ala | Phe | Cys | Arg | Gly | Pro | Val | Phe | Glu | Ser | Val | Ala | Trp |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ala | Arg | Pro | Leu | Pro | Trp | Phe | His | His | Phe | Pro | Asp | Cys | Asp | Pro | Pro |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Leu | Gly | Asn | Cys | Pro | Arg | Pro | Gly | Leu | Leu | Ile | Ser | Pro | Arg | Val | Ile |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Leu | Val | Pro | Pro | Ala | Gln | Ala | Gly | Glu | Gln | Gln | Glu | Trp | Gly | Arg | His |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| His | Leu | Ser | Cys | Thr | Leu | His | Leu | Gln | Gly | Met | Ser | Arg | Pro | Gly | Glu |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Gly | Pro | Ser | Gly | Lys | Met | Leu | Ser | Leu | Ala | Gly | Pro | Gln | His | Gln | Cys |
|     |     | 115 |     |     |     | 120 |     |     |     |     |     | 125 |     |     |     |
| Ser | Glu | Val | Ala | Met | Glu | Pro | Val | Pro | Arg | Gln | Val | Gly | Gly | Ser | Pro |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Ala | Met | Pro | His | Gln | Ala | Ala | Leu | Pro | Gln | Glu | Glu | Lys | Gln | Val | Trp |
| 145 |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     | 160 |     |
| Ala | Cys | Glu | Arg | Asp | Arg |     |     |     |     |     |     |     |     |     |     |
|     |     |     |     | 165 |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 1597

&lt;211&gt; 609

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1597

tcgtcaacgg aaacttcggc cttcgggcct acccataatc cttgggacct tgaacgggta  
 60  
 ccgggtggtt ccgggtggtg ttcagcagct agcttggtt cctttcaggc cccgttggt  
 120  
 ttgggcactg ataccggggg ctgatccgc caacctggag cggtgaccgg caccgtcggg  
 180  
 atcaagccga cctacgggtc gacctccga tacggcgta tcgctatggc ttcattcttg  
 240  
 gatactcctg ggccctgcgc ccgtaccgtc cttgacgccg cgttgctcca tcaggccatt  
 300  
 gccggtcacg acgctatgga ccagaccacg attaatcagc ccaccccgcc ggtcgttgag  
 360  
 gctgcgcggc aggcagacgt ttccggggtg cgcattggcg ttgtcacgga gttgagcggg  
 420  
 cagggttacg accctcaggt cgaggcccgg ttccacgagg ctgtcgagat gctaatagag  
 480  
 gcgggggctg aggtcgttga ggtctcttgc ccgaactttg acctcgcctt acctgcttat  
 540  
 tacctatttc agcctgccga ggtgtctagc aacctggctc gttacgacgc catgcgttac  
 600  
 ggcttacgc  
 609

&lt;210&gt; 1598

&lt;211&gt; 203

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1598

Ser Ser Thr Glu Thr Ser Ala Phe Gly Pro Thr His Asn Pro Trp Asp  
 1 5 10 15  
 Leu Glu Arg Val Pro Gly Gly Ser Gly Gly Gly Ser Ala Ala Ser Leu  
 20 25 30  
 Ala Ser Phe Gln Ala Pro Leu Ala Leu Gly Thr Asp Thr Gly Gly Ser  
 35 40 45  
 Ile Arg Gln Pro Gly Ala Val Thr Gly Thr Val Gly Ile Lys Pro Thr  
 50 55 60  
 Tyr Gly Ser Thr Ser Arg Tyr Gly Val Ile Ala Met Ala Ser Ser Leu  
 65 70 75 80  
 Asp Thr Pro Gly Pro Cys Ala Arg Thr Val Leu Asp Ala Ala Leu Leu  
 85 90 95  
 His Gln Ala Ile Ala Gly His Asp Ala Met Asp Gln Thr Thr Ile Asn  
 100 105 110  
 Gln Pro Thr Pro Ala Val Val Glu Ala Ala Arg Gln Ala Asp Val Ser  
 115 120 125  
 Gly Val Arg Ile Gly Val Val Thr Glu Leu Ser Gly Gln Gly Tyr Asp  
 130 135 140  
 Pro Gln Val Glu Ala Arg Phe His Glu Ala Val Glu Met Leu Ile Glu  
 145 150 155 160  
 Ala Gly Ala Glu Val Val Glu Val Ser Cys Pro Asn Phe Asp Leu Ala

165 170 175  
 Leu Pro Ala Tyr Tyr Leu Ile Gln Pro Ala Glu Val Ser Ser Asn Leu  
 180 185 190  
 Ala Arg Tyr Asp Ala Met Arg Tyr Gly Leu Arg  
 195 200

<210> 1599  
 <211> 526  
 <212> DNA  
 <213> Homo sapiens

<400> 1599  
 gcgtggccga cggctgctgt gtggtcagcg atctttatctt ttcttgatcg attcagaacc  
 60  
 cggcacctgc acgtgtgggt tctctgcttt tgttggggag cgtgcgtcgc gacctggatt  
 120  
 agcatgcacg tgaacacgtg gatggccggg atgctctcgg tgacaggtgg gggtgatcca  
 180  
 gcacgggcg cgggtccggc agtgtattcg gctccctttg ttgaggaatc atgcaaggcg  
 240  
 cttgtgcttt tcgcgctggc catcgcatg gggcgacgga tgacctcggg agttcagacg  
 300  
 gtgagcatgg ccgggctctc ggcaattggt ttcgcctttg ttgagaacat tatgtactac  
 360  
 gcccgtcag ataactacgc ccgtgtgacg gcttcgggtg gggaccccaa acaaggcgtt  
 420  
 gatgaagttg gtgctgttgc ggggagtgtg tgacctgttt gggcatccgc tgttcaccag  
 480  
 catgacgggt atcggctctg cccttgggct gaggtcacga agttga  
 526

<210> 1600  
 <211> 134  
 <212> PRT  
 <213> Homo sapiens

<400> 1600  
 Met His Val Asn Thr Trp Met Ala Gly Met Leu Ser Val Thr Gly Gly  
 1 5 10 15  
 Val Asp Pro Ala Ser Gly Ala Gly Pro Ala Val Tyr Ser Ala Pro Phe  
 20 25 30  
 Val Glu Glu Ser Cys Lys Ala Leu Val Leu Phe Ala Leu Ala Ile Gly  
 35 40 45  
 Met Gly Arg Arg Met Thr Ser Val Val Gln Thr Val Ser Met Ala Gly  
 50 55 60  
 Leu Ser Ala Ile Gly Phe Ala Phe Val Glu Asn Ile Met Tyr Tyr Ala  
 65 70 75 80  
 Arg Ala Asp Asn Tyr Ala Arg Val Thr Ala Ser Gly Gly Asp Pro Lys  
 85 90 95  
 Gln Gly Val Asp Glu Val Gly Ala Val Ala Gly Ser Val Cys Leu Val  
 100 105 110  
 Trp Ala Ser Ala Val His Gln His Asp Gly Tyr Arg Ser Gly Pro Trp  
 115 120 125  
 Ala Glu Val Thr Lys Leu

130

<210> 1601  
 <211> 447  
 <212> DNA  
 <213> Homo sapiens

<400> 1601  
 gccggccgcc ccgtttccgc agattctgga ggagtgccga tggccgagtt catctacacc  
 60  
 atgcacaacg tccgaaaggc ggtgggtgac aaagttatcc ttgacaatgt cacgctgtcg  
 120  
 ttcttcccg ggcgcaagat tgggtgtgtc ggaccgaatg gcgctggcaa atcgacgatg  
 180  
 ctcaagctca tggctggtct cgataagccc aataacggcg atgccaactt ggctaaaggc  
 240  
 gccaccgtcg gaatcttgct tcaggagccc ccgctcaccg aggacaaaac tgttcgcgag  
 300  
 aacgtcgaag aggccgtcgg cgacatcaaa gccaaagtgg cacgggtcga ggaagtctcc  
 360  
 gccgagatgg ccaaccctga cgccgacttt gacgccctga tggcggagat gggtgagctg  
 420  
 cagaccgagc tcgataacgc caacgcg  
 447

<210> 1602  
 <211> 136  
 <212> PRT  
 <213> Homo sapiens

<400> 1602  
 Met Ala Glu Phe Ile Tyr Thr Met His Asn Val Arg Lys Ala Val Gly  
 1 5 10 15  
 Asp Lys Val Ile Leu Asp Asn Val Thr Leu Ser Phe Phe Pro Gly Ala  
 20 25 30  
 Lys Ile Gly Val Val Gly Pro Asn Gly Ala Gly Lys Ser Thr Met Leu  
 35 40 45  
 Lys Leu Met Ala Gly Leu Asp Lys Pro Asn Asn Gly Asp Ala Asn Leu  
 50 55 60  
 Ala Lys Gly Ala Thr Val Gly Ile Leu Leu Gln Glu Pro Pro Leu Thr  
 65 70 75 80  
 Glu Asp Lys Thr Val Arg Glu Asn Val Glu Glu Ala Val Gly Asp Ile  
 85 90 95  
 Lys Ala Lys Leu Ala Arg Phe Glu Glu Val Ser Ala Glu Met Ala Asn  
 100 105 110  
 Pro Asp Ala Asp Phe Asp Ala Leu Met Ala Glu Met Gly Glu Leu Gln  
 115 120 125  
 Thr Glu Leu Asp Asn Ala Asn Ala  
 130 135

<210> 1603  
 <211> 540  
 <212> DNA  
 <213> Homo sapiens

&lt;400&gt; 1603

acgcgtaagc tcaccgaagc catgatggca atgctgctgg aactgcatta cagcaagcag  
 60  
 gaaatccttg aggcgtacct caacgaggtc ttcgtcggtc aggatggcca gcgcgccgtg  
 120  
 cacggggtttg gcttggccag tcagttcttc tttggccagc ctttgtccga gctgaagtgg  
 180  
 catcaagtcg cgttggttggc cgggatgggc aagggcccgct cctattacaa cccgcggcgc  
 240  
 aatccggaac gtgcgctcga gcgtcgtaac ctggtgctgg atgtgctgga acagcagggg  
 300  
 gtagccactg ccgaacaagt cgctgccgca aagaaaatgc cgctgggtgt aaccactcgc  
 360  
 ggcaagctgg cggacagctc cttcccaggc tttatcgacc tgggtcaaacy ccagtgcgct  
 420  
 gaagattacc gcgacgaaga cttgaccgaa gaaggcctgc ggattttcac cagtttcgac  
 480  
 ccgattctgc agatgaaagc cgaagcatcg gtgaacgaca cattcaagcg cctgaccggc  
 540

&lt;210&gt; 1604

&lt;211&gt; 180

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1604

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Arg | Lys | Leu | Thr | Glu | Ala | Met | Met | Ala | Met | Leu | Leu | Glu | Leu | His |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Tyr | Ser | Lys | Gln | Glu | Ile | Leu | Glu | Ala | Tyr | Leu | Asn | Glu | Val | Phe | Val |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gly | Gln | Asp | Gly | Gln | Arg | Ala | Val | His | Gly | Phe | Gly | Leu | Ala | Ser | Gln |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Phe | Phe | Phe | Gly | Gln | Pro | Leu | Ser | Glu | Leu | Lys | Leu | His | Gln | Val | Ala |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Leu | Leu | Val | Gly | Met | Val | Lys | Gly | Pro | Ser | Tyr | Tyr | Asn | Pro | Arg | Arg |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Asn | Pro | Glu | Arg | Ala | Leu | Glu | Arg | Arg | Asn | Leu | Val | Leu | Asp | Val | Leu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Glu | Gln | Gln | Gly | Val | Ala | Thr | Ala | Glu | Gln | Val | Ala | Ala | Ala | Lys | Lys |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Met | Pro | Leu | Gly | Val | Thr | Thr | Arg | Gly | Lys | Leu | Ala | Asp | Ser | Ser | Phe |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Pro | Gly | Phe | Ile | Asp | Leu | Val | Lys | Arg | Gln | Leu | Arg | Glu | Asp | Tyr | Arg |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Asp | Glu | Asp | Leu | Thr | Glu | Glu | Gly | Leu | Arg | Ile | Phe | Thr | Ser | Phe | Asp |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Pro | Ile | Leu | Gln | Met | Lys | Ala | Glu | Ala | Ser | Val | Asn | Asp | Thr | Phe | Lys |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Arg | Leu | Thr | Gly |     |     |     |     |     |     |     |     |     |     |     |     |
|     |     |     | 180 |     |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 1605

&lt;211&gt; 427

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1605

acgcgttggt gcggtcggtc gcacgcagtc cgtccaagag gtacaggcca gcgttgccgc  
 60  
 cattctttgc gggcgggata tgcactggga tattgcggcc catcgctgt gaccacacat  
 120  
 cgcagcgtg gacccaccag cccacctggt cccactcgca cgtgccagta ctgtccgcac  
 180  
 gcaagaaatc gcggtgagct gcgtgcgctt gctgggtgcc gcctgccact acggcaagac  
 240  
 ccagcgctac ggcgactgcc atgatgaccg aaaggacgag acccctaata gatgcagtca  
 300  
 tctttctcct tcacaaagta tttgtaatt gtcacttagc tttatcgctc ggaatctgtg  
 360  
 aaccgttaac atcccgcgc ggaagctaac tagcaagcag tctaatacac tcccgggcca  
 420  
 aatgttg  
 427

&lt;210&gt; 1606

&lt;211&gt; 100

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1606

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Thr | Ala | Ser | Ile | Arg | Gly | Arg | Val | Leu | Ser | Val | Ile | Met | Ala | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ala | Val | Ala | Leu | Gly | Leu | Ala | Val | Val | Ala | Gly | Gly | Thr | Gln | Gln | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| His | Ala | Ala | His | Arg | Asp | Phe | Leu | Arg | Ala | Asp | Ser | Thr | Gly | Thr | Cys |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Glu | Trp | Asp | Gln | Val | Gly | Trp | Trp | Val | Gln | Arg | Cys | Asp | Val | Trp | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Gln | Ala | Met | Gly | Arg | Asn | Ile | Pro | Val | Gln | Ile | Pro | Pro | Ala | Lys | Asn |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Gly | Gly | Asn | Ala | Gly | Leu | Tyr | Leu | Leu | Asp | Gly | Leu | Arg | Ala | Thr | Asp |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Arg | Thr | Asn | Ala |     |     |     |     |     |     |     |     |     |     |     |     |
|     |     |     | 100 |     |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 1607

&lt;211&gt; 396

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1607

gcacggctcc gtcgcggcc gccgtgatgg tacataccgg cgcgaccgtg atcgattctt  
 60  
 tgccgcaagg caatttactt ccacgtcacg gccgatgcga tgaagatgac gattcgctca  
 120  
 cggatgggac tgatcccgta cgaggcgatc gtgggcggga cgatgatgat cgtggcgacg  
 180

ttgctgtacg gattcatttt gtagcataaa taaggagggg ttcgatgaac aggaaaaccc ,  
 240  
 tttctgttgg caccgattc gttcaaggaa agcatgacgg caaaagaagt ctgtatcgcg  
 300  
 atggaaaaag gactgagccg cgtctacccc gacgcccggt ttatccatgt gccgatggcg  
 360  
 gacggaggcg aaggcacggt gcagtcgctg gtcgac  
 396

<210> 1608  
 <211> 56  
 <212> PRT  
 <213> Homo sapiens

<400> 1608  
 Thr Gly Lys Pro Phe Leu Leu Ala Pro Asp Ser Phe Lys Glu Ser Met  
 1 5 10 15  
 Thr Ala Lys Glu Val Cys Ile Ala Met Glu Lys Gly Leu Ser Arg Val  
 20 25 30  
 Tyr Pro Asp Ala Arg Phe Ile His Val Pro Met Ala Asp Gly Gly Glu  
 35 40 45  
 Gly Thr Val Gln Ser Leu Val Asp  
 50 55

<210> 1609  
 <211> 505  
 <212> DNA  
 <213> Homo sapiens

<400> 1609  
 acgcgtagat gccacagcgc caggacacac gccaccgcgg agccgaggat gatccacatg  
 60  
 ggctcgactc acatggacgc catggattcg gcagtggaga gcaggccgcg agcttcgcac  
 120  
 gcggcccgcg tgcgtagtcg cgtcatctca gtgcacatct gttcttcccc gctcatgagg  
 180  
 ttgcggcgt aggacatcgt tacgtccagc atgggtggcg tctcagcaat gtcacagccg  
 240  
 gccttggtga gggcgaggag ccgagcgcgc gtgcttcctg ctggcacgat gcgttcacgt  
 300  
 gctgcgttga tgctgctgat actgatatgc aggatgcgcc cggggtcgaa gacggggaat  
 360  
 ggggtgaatt ggacggtccc ccctggccag cgagtcgttg gacgattcga ctggggacat  
 420  
 gcgcgagcag ggcgacgaca cgccacggaa cgcggcattc atggacgagg gaacggacat  
 480  
 ggagcgagaa aaagcgggcg tcgac  
 505

<210> 1610  
 <211> 129  
 <212> PRT  
 <213> Homo sapiens



&lt;400&gt; 1610

```

Met Pro Arg Ser Val Ala Cys Arg Arg Pro Ala Arg Ala Cys Pro Gln
 1             5             10             15
Ser Asn Arg Pro Thr Thr Arg Trp Pro Gly Gly Thr Val Gln Phe Thr
      20             25             30
Pro Phe Pro Val Phe Asp Pro Gly Arg Ile Leu His Ile Ser Ile Asp
      35             40             45
Asp Ile Asn Ala Ala Arg Glu Arg Ile Val Pro Ala Gly Ser Thr Arg
      50             55             60
Ala Arg Leu Leu Ala Leu His Lys Ala Gly Cys Asp Ile Ala Glu Ile
65             70             75             80
Ala Thr Met Leu Asp Val Thr Met Ser Tyr Ala Ala Asn Leu Met Ser
      85             90             95
Gly Glu Glu Gln Met Cys Thr Glu Met Thr Arg Leu Arg Ser Arg Ala
      100             105             110
Ala Cys Glu Ala Arg Gly Leu Leu Ser Thr Ala Glu Ser Met Ala Ser
      115             120             125
Met

```

&lt;210&gt; 1611

&lt;211&gt; 532

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1611

```

acgcgtgctg cgtttacagt tgcgtctatt gatttaggtg cgcattccaga atttttagga
60
aaaaatgata ttcaattagg caaaaaagaa tctgtagagg atactgcgaa agtattaggt
120
agaatgttcg atggtattga attccgtggt ttttcacaac aagctggtga agatttagcg
180
aagttctctg gtgtaccggg gtggaatgga ttaacagacg attggcatcc tacacaaatg
240
ttagctgatt ttatgacaat aaaagagaat tttggatatc tagaaggaat aaacttaact
300
tacgttgtag atggacgtaa taatattgag cattcattaa tggtagcagg tgctatgtta
360
ggtgttaatg taagaatttg tacacctaaa tcattaaatc caaaagaggc atatgttgat
420
attgcaaaag aaaaagcgag tcaatatggt gggttcagtca tgattacgga taatattgca
480
gaagcagttg aaaatacaga tgctatatat acagatgttt gggatatcgac gg
532

```

&lt;210&gt; 1612

&lt;211&gt; 177

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1612

```

Thr Arg Ala Ala Phe Thr Val Ala Ser Ile Asp Leu Gly Ala His Pro
 1             5             10             15
Glu Phe Leu Gly Lys Asn Asp Ile Gln Leu Gly Lys Lys Glu Ser Val

```

```

      20      25      30
Glu Asp Thr Ala Lys Val Leu Gly Arg Met Phe Asp Gly Ile Glu Phe
      35      40      45
Arg Gly Phe Ser Gln Gln Ala Gly Glu Asp Leu Ala Lys Phe Ser Gly
      50      55      60
Val Pro Gly Trp Asn Gly Leu Thr Asp Asp Trp His Pro Thr Gln Met
      65      70      75      80
Leu Ala Asp Phe Met Thr Ile Lys Glu Asn Phe Gly Tyr Leu Glu Gly
      85      90      95
Ile Asn Leu Thr Tyr Val Gly Asp Gly Arg Asn Asn Ile Ala His Ser
      100      105      110
Leu Met Val Ala Gly Ala Met Leu Gly Val Asn Val Arg Ile Cys Thr
      115      120      125
Pro Lys Ser Leu Asn Pro Lys Glu Ala Tyr Val Asp Ile Ala Lys Glu
      130      135      140
Lys Ala Ser Gln Tyr Gly Gly Ser Val Met Ile Thr Asp Asn Ile Ala
      145      150      155      160
Glu Ala Val Glu Asn Thr Asp Ala Ile Tyr Thr Asp Val Trp Val Ser
      165      170      175
Thr

```

<210> 1613  
 <211> 584  
 <212> DNA  
 <213> Homo sapiens

```

<400> 1613
nnacgcgttc agccgagaaa tatgctgctt tttgcctgcc acctcacaaa tgctacggca
60
cagggcgctc aggttttgcg cctcctggta cgttgctaca cacttgctca cctcccagcg
120
gtatcaatac aacttgcgaa atgcagacaa ggcccaggcc taagacatgg tagacataca
180
tatatacaag gaattcacta tatattgggt gaaaggagat cttcccgttc ctgttcttcc
240
tctgccgat cctgtgaagc gttcagggag gtcgacatgg ataatgtgcg tatgcctggc
300
acggtaaagt gtcgcgggct tgtagatgcg tgtgaacgtt ttcgtgactt gaagaggtcg
360
aagctgatgt gttcgcgtga gctcgatgca gcgcgctgcg ttgcgctgcct tgtggtcgat
420
cgtcgccccg atccgataga atgcggagtt gtattttcgt agtactgctc gacaatgcc
480
gtggcgagg cgatgagttc ctcatattgcg tctttctcga ggtcttggtc catgtccata
540
aacataccaa agctggatgg gtcatacgac ggcgagcat gcat
584

```

<210> 1614  
 <211> 153  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 1614

Xaa Arg Val Gln Pro Arg Asn Met Leu Leu Phe Ala Cys His Leu Thr  
 1 5 10 15  
 Asn Ala Thr Ala Gln Gly Val Gln Val Leu Arg Leu Leu Val Arg Cys  
 20 25 30  
 Tyr Thr Leu Ala His Leu Pro Ala Val Ser Ile Gln Leu Ala Lys Cys  
 35 40 45  
 Arg Gln Gly Pro Gly Leu Arg His Gly Arg His Thr Tyr Ile Gln Gly  
 50 55 60  
 Ile His Tyr Ile Leu Gly Glu Arg Arg Ser Ser Arg Ser Cys Ser Ser  
 65 70 75 80  
 Ser Ala Ala Ser Cys Glu Ala Phe Arg Glu Val Asp Met Asp Asn Val  
 85 90 95  
 Arg Met Pro Gly Thr Val Lys Cys Arg Gly Leu Val Asp Ala Cys Glu  
 100 105 110  
 Arg Phe Arg Asp Leu Lys Arg Ser Lys Leu Met Cys Ser Arg Glu Leu  
 115 120 125  
 Asp Ala Ala Arg Cys Val Ala Cys Leu Val Val Asp Arg Arg Pro Asp  
 130 135 140  
 Pro Ile Glu Cys Gly Val Val Phe Ser  
 145 150

&lt;210&gt; 1615

&lt;211&gt; 363

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1615

gccggcttgc ccgacgcgtc tatgggtgat gttctgtcct ctgtcgtcgg gccgtggggc  
 60  
 tcggtgcttg tcagtgtctg tgatcatcatt tccctgcttg gggctctact ggcctggatc  
 120  
 ctactgtgcg gtgagacgat gcaggtgccg ggtgaggacg gcaccatgcc gaaactgttc  
 180  
 ggacggatca acaaacatga ggctccagct cccgctttgt ggatcaccaa catcgtctcc  
 240  
 cagatatgcc ttgtcatgac ggtgttgtgg gacggtgctt acttggcgat ggcgaccctg  
 300  
 gctgccgccc tcacctctgt gccgtacctg ctgtcagccg cattcgcctt gaagatggtg  
 360  
 atc  
 363

&lt;210&gt; 1616

&lt;211&gt; 121

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1616

Ala Gly Leu Pro Asp Ala Ser Met Gly Asp Val Leu Ser Ser Val Val  
 1 5 10 15  
 Gly Pro Trp Gly Ser Val Leu Val Ser Ala Gly Val Ile Ile Ser Leu  
 20 25 30  
 Leu Gly Ala Leu Leu Ala Trp Ile Leu Leu Cys Gly Glu Thr Met Gln

|            |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| <400> 1618 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
| Thr        | Gly | Asp | Tyr | Leu | Trp | Glu | Lys | Lys | Gly | Ile | Val | Pro | Ile | Leu | Lys |  |
| 1          |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |  |
| Ile        | Asp | Lys | Gly | Leu | Ala | Asp | Glu | Gly | Cys | His | Val | Arg | Leu | Met | Lys |  |
|            |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |  |
| Pro        | Ile | Pro | Gly | Leu | Asp | Glu | Leu | Val | His | Arg | Ala | Val | Glu | Glu | Lys |  |
|            |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |  |
| His        | Ile | Phe | Gly | Thr | Lys | Glu | Arg | Ser | Val | Ile | Leu | Asp | Asp | Asp | Lys |  |
|            | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |  |
| Ala        | Gly | Ile | Glu | Lys | Ile | Val | Asp | Gln | Gln | Phe | Glu | Leu | Ala | Glu | Gln |  |
| 65         |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |  |
| Val        | Arg | Ala | Ala | Gly | Leu | Val | Pro | Ile | Leu | Glu | Pro | Glu | Val | Asp | Ile |  |
|            |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |  |
| His        | Ala | Pro | His | Lys | Glu | Lys | Ala | Glu | Glu | Arg | Leu | His | Asn | Leu | Ile |  |

```

          100          105          110
Arg Glu His Ile Asp Ser Leu Pro Leu Asp Ala Lys Ile Met Leu Lys
          115          120          125
Leu Thr Ile Pro Ser Ser Glu Asp Leu Tyr Ala Asp Leu Ile Ala Asp
          130          135          140
Pro Lys Val Leu Arg
145

```

```

<210> 1619
<211> 355
<212> DNA
<213> Homo sapiens

```

```

<400> 1619
nnggtaccga aaccggtgct gctaccgcat aaaatcaaag gaactagtat gcataacgta
60
acaacaaatg gtgcctccat tcccgccctt ggcttggca ctttccgtat gcccggcgaa
120
gatgtgcttc gcatcgctcc ttacgcgctc aaggtgggt ttcgccatgt cgataccgct
180
cagatttatg gcaatgaagt cgaggctcgt gaagcaattg cgacttccgg cgttcagcgt
240
ggcgacatct ttctgaccac aaaagtctgg gtagataatt ataagcatga tgctttcatc
300
gcatctgtcg atgaaagcct taccaagctt aagaccgact atgtcgatct gctgc
355

```

```

<210> 1620
<211> 118
<212> PRT
<213> Homo sapiens

```

```

<400> 1620
Xaa Val Pro Lys Pro Val Ser Leu Pro His Lys Ile Lys Gly Thr Ser
1          5          10          15
Met His Asn Val Thr Thr Asn Gly Ala Ser Ile Pro Ala Leu Gly Leu
          20          25          30
Gly Thr Phe Arg Met Pro Gly Glu Asp Val Leu Arg Ile Val Pro Tyr
          35          40          45
Ala Leu Lys Ala Gly Phe Arg His Val Asp Thr Ala Gln Ile Tyr Gly
          50          55          60
Asn Glu Val Glu Val Gly Glu Ala Ile Ala Thr Ser Gly Val Gln Arg
65          70          75          80
Gly Asp Ile Phe Leu Thr Thr Lys Val Trp Val Asp Asn Tyr Lys His
          85          90          95
Asp Ala Phe Ile Ala Ser Val Asp Glu Ser Leu Thr Lys Leu Lys Thr
          100          105          110
Asp Tyr Val Asp Leu Leu
115

```

```

<210> 1621
<211> 386
<212> DNA
<213> Homo sapiens

```

&lt;400&gt; 1621

gcgcgccatg gagggcggccc gggcgcgccc aggatgctcc aggcgaagtg aagcgggtccg  
60  
gctgggggtcg gcgggacccg cggggccatgt acggcgacat attcaacgcc acggggcggg  
120  
ccccgaggc ggcggtaggc agcgcgctgg cccagggagc cacgggtcaag gcagaaggcg  
180  
ctttgccgct ggagctggcc actgcgcgcg gtatgagggg cggcgcgggc acaaagcccc  
240  
acctgcccac ctacctgtg ctcttcttcc tgctgctgct ctggggggcg ctgggcggcc  
300  
tcttcacggt ttgccagctg cgccattcgg ccttcgccgc gctgccccac gaccgcttcg  
360  
ctcgcgacgc ccgcgcggcc ggaagg  
386

&lt;210&gt; 1622

&lt;211&gt; 126

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1622

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Glu | Ala | Pro | Arg | Val | Ala | Pro | Gly | Cys | Ser | Arg | Pro | Ser | Glu | Ala |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Val | Arg | Leu | Gly | Ser | Ala | Gly | Pro | Ala | Gly | His | Val | Arg | Arg | His | Ile |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |     |
| Gln | Arg | His | Gly | Ala | Gly | Pro | Arg | Gly | Gly | Gly | Arg | Gln | Arg | Ala | Gly |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |
| Pro | Arg | Ser | His | Gly | Gln | Gly | Arg | Arg | Arg | Phe | Ala | Ala | Gly | Ala | Gly |
|     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |
| His | Cys | Ala | Arg | Tyr | Glu | Gly | Arg | Arg | Gly | His | Lys | Ala | Arg | Pro | Ala |
| 65  |     |     | 70  |     |     |     |     |     | 75  |     |     |     | 80  |     |     |
| His | Leu | Pro | Ala | Ala | Leu | Leu | Pro | Ala | Ala | Ala | Leu | Gly | Gly | Ala | Arg |
|     |     |     | 85  |     |     |     | 90  |     |     |     |     |     | 95  |     |     |
| Arg | Pro | Leu | His | Arg | Leu | Pro | Ala | Ala | Pro | Phe | Gly | Leu | Arg | Arg | Ala |
|     |     |     | 100 |     |     |     | 105 |     |     |     |     |     | 110 |     |     |
| Ala | Pro | Arg | Pro | Leu | Arg | Ser | Arg | Arg | Pro | Arg | Ala | Arg | Lys |     |     |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     |     | 125 |     |     |

&lt;210&gt; 1623

&lt;211&gt; 314

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1623

nctggtgccc agagcctcgt cgggggtccag cccaggggcc ttgcgagtc agacacttgg  
60  
ggcccttgct tgtggttttt ctgggagctt tgggcccagg gttccccgga cccttccttg  
120  
aacttttccg cagtttcaga ggagagtctg caagtgagag ctgcagtgcac tgtgccttgt  
180  
gcttggcacc caagcagggc atgggagtct taagtgaac cagggcctca aggacaacag  
240

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<210> 1628  
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<400> 1628  
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|   |     |    |    |
|---|-----|----|----|
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|   | 20  | 25 | 30 |
| Val Gln Thr Arg Phe Pro Pro Glu Pro Asn Gly Tyr Leu His Ile Gly |     |    |    |
|   | 35  | 40 | 45 |
| His Ala Lys Ala Ile Val Thr Asp Phe Gly Val Ala Glu Asp Phe Gly |     |    |    |
|   | 50  | 55 | 60 |
| Gly Thr Cys Asn Leu Arg Leu Asp Asp Thr Asn Pro Gly Thr Glu Glu |     |    |    |
| 65  | 70  | 75 | 80 |
| Thr Glu Tyr Val Glu Ser Ile Val Ala Asp Ile Glu Trp Leu Gly Tyr |     |    |    |
|   | 85  | 90 | 95 |
| Ser Pro Ala His Val Val His Ala                                 |     |    |    |
|   | 100 |    |    |

&lt;210&gt; 1629

&lt;211&gt; 4519

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1629

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<210> 1630

<211> 496

<212> PRT

<213> Homo sapiens

<400> 1630

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| Pro | Asn | Cys | Trp | Glu | Cys | Pro | Lys | Cys | Tyr | Gln | Glu | Asp | Ser | Ser | Glu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Lys | Ala | Gln | Lys | Arg | Lys | Met | Glu | Glu | Ser | Asp | Glu | Glu | Ala | Val | Gln |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ala | Lys | Val | Leu | Arg | Pro | Leu | Arg | Ser | Cys | Asp | Glu | Pro | Leu | Thr | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Pro | Pro | His | Ser | Pro | Thr | Ser | Met | Leu | Gln | Leu | Ile | His | Asp | Pro | Val |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Ser | Pro | Arg | Gly | Met | Val | Thr | Arg | Ser | Ser | Pro | Gly | Ala | Gly | Pro | Ser |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Asp | His | His | Ser | Ala | Ser | Arg | Asp | Glu | Arg | Phe | Lys | Arg | Arg | Gln | Leu |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Leu | Arg | Leu | Gln | Ala | Thr | Glu | Arg | Thr | Met | Val | Arg | Glu | Lys | Glu | Asn |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Asn | Pro | Ser | Gly | Lys | Lys | Glu | Leu | Ser | Glu | Val | Glu | Lys | Ala | Lys | Ile |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Arg | Gly | Ser | Tyr | Leu | Thr | Val | Thr | Leu | Gln | Arg | Pro | Thr | Lys | Glu | Leu |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| His | Gly | Thr | Ser | Ile | Val | Pro | Lys | Leu | Gln | Ala | Ile | Thr | Ala | Ser | Ser |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Ala | Asn | Leu | Arg | His | Ser | Pro | Arg | Val | Leu | Val | Gln | His | Cys | Pro | Ala |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Arg | Thr | Pro | Gln | Arg | Gly | Asp | Glu | Glu | Gly | Leu | Gly | Gly | Glu | Glu | Glu |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Glu | Glu | Glu | Glu | Glu | Glu | Glu | Glu | Asp | Asp | Ser | Ala | Glu | Glu | Gly | Gly |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Ala | Ala | Arg | Leu | Asn | Gly | Arg | Gly | Ser | Trp | Ala | Gln | Asp | Gly | Asp | Glu |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Ser | Trp | Met | Gln | Arg | Glu | Val | Trp | Met | Ser | Val | Phe | Arg | Tyr | Leu | Ser |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     | 240 |     |
| Arg | Arg | Glu | Leu | Cys | Glu | Cys | Met | Arg | Val | Cys | Lys | Thr | Trp | Tyr | Lys |
|     |     |     | 245 |     |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Trp | Cys | Cys | Asp | Lys | Arg | Leu | Trp | Thr | Lys | Ile | Asp | Leu | Ser | Arg | Cys |
|     |     | 260 |     |     |     |     |     | 265 |     |     |     |     | 270 |     |     |
| Lys | Ala | Ile | Val | Pro | Gln | Ala | Leu | Ser | Gly | Ile | Ile | Lys | Arg | Gln | Pro |
|     |     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |
| Val | Ser | Leu | Asp | Leu | Ser | Trp | Thr | Asn | Ile | Ser | Lys | Lys | Gln | Leu | Thr |

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Cys Ser Trp Ser Ala Val Ser Ala Leu Ser Thr Ser Ser Cys Pro Leu
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Leu Arg Thr Leu Asp Leu Arg Trp Ala Val Gly Ile Lys Asp Pro Gln
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Ile Arg Asp Leu Leu Thr Pro Pro Ala Asp Lys Pro Gly Gln Asp Asn
      355              360              365
Arg Ser Lys Leu Arg Asn Met Thr Asp Phe Arg Leu Ala Gly Leu Asp
      370              375              380
Ile Thr Asp Ala Thr Leu Arg Leu Ile Ile Arg His Met Pro Leu Leu
385              390              395              400
Ser Arg Leu Asp Leu Ser His Cys Ser His Leu Thr Asp Gln Ser Ser
      405              410              415
Asn Leu Leu Thr Ala Val Gly Ser Ser Thr Arg Tyr Ser Leu Thr Glu
      420              425              430
Leu Asn Met Ala Gly Cys Asn Lys Leu Thr Asp Gln Thr Leu Ile Tyr
      435              440              445
Leu Arg Arg Ile Ala Asn Val Thr Leu Ile Asp Leu Arg Gly Cys Lys
      450              455              460
Gln Ile Thr Arg Lys Ala Cys Glu His Phe Ile Ser Asp Leu Ser Ile
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<210> 1631  
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<210> 1632  
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<210> 1636

<211> 243

<212> PRT

<213> Homo sapiens

<400> 1636

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| Met | Ala | Ala | His | Leu | Ser | Tyr | Gly | Arg | Val | Asn | Leu | Asn | Val | Leu | Arg |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Glu | Ala | Val | Arg | Arg | Glu | Leu | Arg | Glu | Phe | Leu | Asp | Lys | Cys | Ala | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ser | Lys | Ala | Ile | Val | Trp | Asp | Glu | Tyr | Leu | Thr | Gly | Pro | Phe | Gly | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ile | Ala | Gln | Tyr | Ser | Leu | Leu | Lys | Glu | His | Glu | Val | Glu | Lys | Met | Phe |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Thr | Leu | Lys | Gly | Asn | Arg | Leu | Pro | Ala | Ala | Asp | Val | Lys | Asn | Ile | Ile |
| 65  |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     | 80  |     |
| Phe | Phe | Val | Arg | Pro | Arg | Leu | Glu | Leu | Met | Asp | Ile | Ile | Ala | Glu | Asn |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Val | Leu | Ser | Glu | Asp | Arg | Arg | Gly | Pro | Thr | Arg | Asp | Phe | His | Ile | Leu |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Phe | Val | Pro | Arg | Arg | Ser | Leu | Leu | Cys | Glu | Gln | Arg | Leu | Lys | Asp | Leu |
|     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |     |
| Gly | Val | Leu | Gly | Ser | Phe | Ile | His | Arg | Glu | Glu | Tyr | Ser | Leu | Asp | Leu |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Ile | Pro | Phe | Asp | Gly | Asp | Leu | Leu | Ser | Met | Glu | Ser | Glu | Gly | Ala | Phe |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Lys | Glu | Cys | Tyr | Leu | Glu | Gly | Asp | Gln | Thr | Ser | Leu | Tyr | His | Ala | Ala |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|
|     |     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     |     | 175 |  |  |  |
| Lys | Gly | Leu | Met | Thr | Leu | Gln | Ala | Leu | Tyr | Gly | Thr | Ile | Pro | Gln | Ile |     |  |  |  |
|     |     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |  |  |  |
| Phe | Gly | Lys | Gly | Glu | Cys | Ala | Arg | Val | Arg | Thr | Gly | Cys | Phe | Val | Val |     |  |  |  |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |     |  |  |  |
| Val | Lys | Glu | Gly | Pro | Ser | His | Pro | Lys | Arg | Glu | Glu | Glu | Arg | Glu | Ala |     |  |  |  |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |     |  |  |  |
| Pro | Tyr | Lys | Gln | Ile | Gln | Leu | Ile | Leu | Ile | Ile | Tyr | Glu | Tyr | Cys | Thr |     |  |  |  |
| 225 |     |     |     |     | 230 |     |     |     | 235 |     |     |     |     | 240 |     |     |  |  |  |
| His | Glu | Phe |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |

&lt;210&gt; 1637

&lt;211&gt; 357

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1637

```

ntcatgatga cacagacccc cgcgcaccca ggcttgatct ccctgcaagg catcggaaca
60
cgttatcagt tggccgggca aaagctgtcc attctcaatg acgtgtgcct gtccatctcc
120
cgcggtgaca gctgcggcat cctcggcgcc tccgggtccg gcaagagcac cctgctcaat
180
atccttgccc tgctggacct gcccaacagc ggccagtacc actttgccgg ccacgatatt
240
ttggcgctca ccccgacga actgtcggcg atccgcaact cagntnnaat ggttgtgttc
300
cagagcttca acctgctgcc gcgcctcagc gccctggaca acgtcgccct gccctg
357

```

&lt;210&gt; 1638

&lt;211&gt; 119

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1638

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| Xaa | Met | Met | Thr | Gln | Thr | Pro | Ala | His | Pro | Gly | Leu | Ile | Ser | Leu | Gln |  |  |  |  |
| 1   |     |     | 5   |     |     |     |     |     | 10  |     |     |     |     | 15  |     |  |  |  |  |
| Gly | Ile | Gly | Lys | Arg | Tyr | Gln | Leu | Ala | Gly | Gln | Lys | Leu | Ser | Ile | Leu |  |  |  |  |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |     |  |  |  |  |
| Asn | Asp | Val | Cys | Leu | Ser | Ile | Ser | Arg | Gly | Asp | Ser | Cys | Gly | Ile | Leu |  |  |  |  |
|     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |  |  |  |  |
| Gly | Ala | Ser | Gly | Ser | Gly | Lys | Ser | Thr | Leu | Leu | Asn | Ile | Leu | Gly | Leu |  |  |  |  |
|     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |  |  |  |  |
| Leu | Asp | Leu | Pro | Asn | Ser | Gly | Gln | Tyr | His | Phe | Ala | Gly | His | Asp | Ile |  |  |  |  |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |     |  |  |  |  |
| Leu | Ala | Leu | Thr | Pro | Asp | Glu | Leu | Ser | Ala | Ile | Arg | Asn | Ser | Xaa | Xaa |  |  |  |  |
|     |     | 85  |     |     |     | 90  |     |     |     |     |     | 95  |     |     |     |  |  |  |  |
| Met | Val | Val | Phe | Gln | Ser | Phe | Asn | Leu | Leu | Pro | Arg | Leu | Ser | Ala | Leu |  |  |  |  |
|     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |     |  |  |  |  |
| Asp | Asn | Val | Ala | Leu | Pro | Leu |     |     |     |     |     |     |     |     |     |  |  |  |  |
|     |     | 115 |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |



<210> 1639  
 <211> 396  
 <212> DNA  
 <213> Homo sapiens

<400> 1639  
 acgcgtgtac gtgcgcgtgt gatttcacat gccctcaaag atattcttac tgaaggcgat  
 60  
 aaagttatcg ttatgggaca taagcgacca gatttagatg ctataggtgc agctatcgga  
 120  
 gtttcgcgct ttgcatcaat gaataattta gaggcattta tcgttcttaa tgattctgat  
 180  
 attgatccga cattacgtcg tggtatggat gagattgata agaaaccgga actaaaagaa  
 240  
 cgctttgtaa catcggtatga ggcttgggat atgatgactt ctaagacgac tgctggtgtt  
 300  
 gtagatacac ataaacctga aatggtctta gatgaaaatg tcttaaataa agcaaaccgc  
 360  
 aaagtagtca ttgatcatca tagacgtggc gaaact  
 396

<210> 1640  
 <211> 132  
 <212> PRT  
 <213> Homo sapiens

<400> 1640  
 Thr Arg Val Arg Ala Arg Val Ile Ser His Ala Leu Lys Asp Ile Leu  
 1 5 10 15  
 Thr Glu Gly Asp Lys Val Ile Val Met Gly His Lys Arg Pro Asp Leu  
 20 25 30  
 Asp Ala Ile Gly Ala Ala Ile Gly Val Ser Arg Phe Ala Ser Met Asn  
 35 40 45  
 Asn Leu Glu Ala Phe Ile Val Leu Asn Asp Ser Asp Ile Asp Pro Thr  
 50 55 60  
 Leu Arg Arg Val Met Asp Glu Ile Asp Lys Lys Pro Glu Leu Lys Glu  
 65 70 75 80  
 Arg Phe Val Thr Ser Asp Glu Ala Trp Asp Met Met Thr Ser Lys Thr  
 85 90 95  
 Thr Val Val Val Val Asp Thr His Lys Pro Glu Met Val Leu Asp Glu  
 100 105 110  
 Asn Val Leu Asn Lys Ala Asn Arg Lys Val Val Ile Asp His His Arg  
 115 120 125  
 Arg Gly Glu Thr  
 130

<210> 1641  
 <211> 376  
 <212> DNA  
 <213> Homo sapiens

<400> 1641  
 ttatcagcaa acgacagcag acaagagctc ctggggctct ggggaaatgc tgctgcctgc  
 60

tggccaaacg aactgatgga tgggctcttg gagtgggaga gactgggcag aagctgtgtg  
 120  
 ggggtgggtga ctcccaacct aaagaaccca ctgagacata tgtggcttcc ctcttcacc  
 180  
 ttcattgcct ctttccgtct agatgctggc aaggggggac ttggtggaca aagagagcta  
 240  
 ctattcattc aggagctatg ttacaccagt cactttacat gtgccacttg ctctgggtta  
 300  
 aactgtgcct cccctcactc atatgttgaa gtcctaaccc taactacctc agaatgggac  
 360  
 gttatttgga aaaaag  
 376

<210> 1642  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 1642  
 Met Asp Gly Leu Leu Glu Trp Glu Arg Leu Gly Arg Ser Cys Val Gly  
 1 5 10 15  
 Trp Val Thr Pro Asn Leu Lys Asn Pro Leu Arg His Met Trp Leu Pro  
 20 25 30  
 Ser Ser Thr Phe Ile Ala Ser Phe Arg Leu Asp Ala Gly Lys Gly Gly  
 35 40 45  
 Leu Gly Gly Gln Arg Glu Leu Leu Phe Ile Gln Glu Leu Cys Tyr Thr  
 50 55 60  
 Ser His Phe Thr Cys Ala Thr Cys Ser Gly Leu Asn Cys Ala Ser Pro  
 65 70 75 80  
 His Ser Tyr Val Glu Val Leu Thr Leu Thr Thr Ser Glu Trp Asp Val  
 85 90 95  
 Ile Trp Lys Lys  
 100

<210> 1643  
 <211> 494  
 <212> DNA  
 <213> Homo sapiens

<400> 1643  
 aagcttccag aattccatag gaacccagct gcccttcttg tacctcagt aggtggagcc  
 60  
 gagtgtctga gagcaggtgc aggagaaggt gtgggctcca cctgggcctc tgaagccagg  
 120  
 ggccagaatc ccagatcta ggtccaagag ggggctccat gacctccca tgctgctcct  
 180  
 ctgcttggat ccaggatata agaaaggagg ggcacacact gtgggggaac tctggggtcc  
 240  
 cctgtgtgca tcagcgagtc ccgggtctgc cccaccagga tgcaaagggc ctggctgctc  
 300  
 cagcccatg ctcacagccc tataagtgca cgatggcacc ctatatcatc taagcggggc  
 360  
 tgtgcctcct gaggcttttag ggacaccaga atgagccccc ctggcgagg tctggctctg  
 420

gggtgtgtgga gatgccacct gggacgggaa ccccaggtgc atggagcccc actgcagaca  
 480  
 ccatcccccg tgtg  
 494

<210> 1644  
 <211> 103  
 <212> PRT  
 <213> Homo sapiens

<400> 1644  
 Met Gly Leu Glu Gln Pro Gly Pro Leu His Pro Gly Gly Ala Asp Pro  
 1 5 10 15  
 Gly Leu Ala Asp Ala His Arg Gly Pro Gln Ser Ser Pro Thr Val Cys  
 20 25 30  
 Ala Pro Pro Phe Leu Tyr Pro Gly Ser Lys Gln Arg Ser Ser Met Gly  
 35 40 45  
 Arg Ser Trp Ser Pro Leu Leu Asp Leu Asp Leu Gly Ile Leu Ala Pro  
 50 55 60  
 Gly Phe Arg Gly Pro Gly Gly Ala His Thr Phe Ser Cys Thr Cys Ser  
 65 70 75 80  
 Gln Thr Leu Gly Ser Thr Ser Leu Arg Tyr Gln Lys Gly Ser Trp Val  
 85 90 95  
 Pro Met Glu Phe Trp Lys Leu  
 100

<210> 1645  
 <211> 330  
 <212> DNA  
 <213> Homo sapiens

<400> 1645  
 nnagatctgt cggataatgg ctttggctcc gacatggtga cactggtgct tgccatcggg  
 60  
 aggagccggt ctctgaaaca cgtggccctt ggaaggaact tcaacgttcg gtgcaaggag  
 120  
 accctggacg atgtcctgca tcggatagcc cagctaatagc aggatgacga ctgtcctttg  
 180  
 cagtcactat ccgtggctga gtcgcggttg aagcaggggtg ccagcatcct gatccgggct  
 240  
 ttgggcacca atcctaaact gacagcgctg gatatcagtg gcaatgccat aggggatgct  
 300  
 ggggccaaga tgctagccaa ggctctacgc  
 330

<210> 1646  
 <211> 110  
 <212> PRT  
 <213> Homo sapiens

<400> 1646  
 Xaa Asp Leu Ser Asp Asn Gly Phe Gly Ser Asp Met Val Thr Leu Val  
 1 5 10 15  
 Leu Ala Ile Gly Arg Ser Arg Ser Leu Lys His Val Ala Leu Gly Arg

```

<400> 1648
Met Asn Gly Gly Asn Glu Ser Ser Gly Ala Asp Arg Ala Gly Gly Pro
 1          5          10          15
Val Ala Thr Ser Val Pro Ile Gly Trp Gln Arg Cys Val Arg Glu Gly
          20          25          30
Ala Val Leu Tyr Ile Ser Pro Ser Gly Thr Glu Leu Ser Ser Leu Glu
          35          40          45
Gln Thr Arg Ser Tyr Leu Leu Ser Asp Gly Thr Cys Lys Cys Gly Leu
          50          55          60
Glu Cys Pro Leu Asn Val Pro Lys Val Phe Asn Phe Asp Pro Leu Ala
65          70          75          80
Pro Val Thr Pro

```

<210> 1649  
 <211> 441  
 <212> DNA  
 <213> Homo sapiens

<400> 1649  
 gcgtcggcag ctgaacgggt gctactggca atcggcgaac ccgaactgct ggatacgtcc  
 60  
 accaactcac gggtgtcgcg catcttctcc aacaagggtga tccggcgcta tccggccttt  
 120  
 gaagacttcc acgggatgga agaatgcac gatcagatcg ttctgtatct ccgccacgcc  
 180  
 gcccaaggcc tggaagagaa gaaacagatc ctttacctgc tcggccccgt cggcggcggt  
 240  
 aaatcgctcc tggccgaaaa gctgaaacag ctgatcgaga aggtcccctt ctacgccatc  
 300  
 aagggtctgc cggctcttga gtcgccccgt ggggtgttca acgccactga agacggcgcg  
 360  
 atcctcgagg aagacttcgg gattccacgg cgttacctga acaccatcat gtcgccccgt  
 420  
 gcgaccaagc gcctggccga a  
 441

<210> 1650  
 <211> 147  
 <212> PRT  
 <213> Homo sapiens

<400> 1650  
 Ala Ser Ala Ala Glu Arg Val Leu Leu Ala Ile Gly Glu Pro Glu Leu  
 1 5 10 15  
 Leu Asp Thr Ser Thr Asn Ser Arg Leu Ser Arg Ile Phe Ser Asn Lys  
 20 25 30  
 Val Ile Arg Arg Tyr Pro Ala Phe Glu Asp Phe His Gly Met Glu Glu  
 35 40 45  
 Cys Ile Asp Gln Ile Val Ser Tyr Phe Arg His Ala Ala Gln Gly Leu  
 50 55 60  
 Glu Glu Lys Lys Gln Ile Leu Tyr Leu Leu Gly Pro Val Gly Gly Gly  
 65 70 75 80  
 Lys Ser Ser Leu Ala Glu Lys Leu Lys Gln Leu Ile Glu Lys Val Pro  
 85 90 95  
 Phe Tyr Ala Ile Lys Gly Ser Pro Val Phe Glu Ser Pro Leu Gly Leu  
 100 105 110  
 Phe Asn Ala Thr Glu Asp Gly Ala Ile Leu Glu Glu Asp Phe Gly Ile  
 115 120 125  
 Pro Arg Arg Tyr Leu Asn Thr Ile Met Ser Pro Trp Ala Thr Lys Arg  
 130 135 140  
 Leu Ala Glu  
 145

<210> 1651  
 <211> 408

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1651

```

nccgcggatc cctccggcat cctgggtatc gctccctcga aggaatccgg agccccgactg
60
cgccgcgagc tttccgaacg cctcgaggat tacgccgcac aaacttccat ggtgcgttcc
120
gtacactccc tcgcattcgc gttgctgcgc acagcggccg aggaggagct gcgccttatt
180
accggtgcgg acnaagacgc cgttatccgc gagctgctca cgggccaagc agaagacgga
240
catggctcgt ggcccgcgga gatgcgcccc gcgtggaatn natgtgggct ttcgcggcag
300
ctgcgcgatt tccttttgcg ttccattgaa cgcggcctgg gaccgggtga cctagagagc
360
ctcgggtgccg agcacggccg ccccatgtgg tctgcggcgg gtgaattc
408

```

&lt;210&gt; 1652

&lt;211&gt; 136

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1652

```

Xaa Ala Asp Pro Ser Gly Ile Leu Val Ile Ala Pro Ser Lys Glu Ser
1           5           10          15
Gly Ala Arg Leu Arg Arg Glu Leu Ser Glu Arg Leu Glu Asp Tyr Ala
20          25          30
Ala Gln Thr Ser Met Val Arg Ser Val His Ser Leu Ala Phe Ala Leu
35          40          45
Leu Arg Thr Ala Ala Glu Glu Leu Arg Leu Ile Thr Gly Ala Asp
50          55          60
Xaa Asp Ala Val Ile Arg Glu Leu Leu Thr Gly Gln Ala Glu Asp Gly
65          70          75          80
His Gly Ser Trp Pro Ala Glu Met Arg Pro Ala Trp Asn Xaa Cys Gly
85          90          95
Leu Ser Arg Gln Leu Arg Asp Phe Leu Leu Arg Ser Ile Glu Arg Gly
100         105         110
Leu Gly Pro Gly Asp Leu Glu Ser Leu Gly Ala Glu His Gly Arg Pro
115         120         125
Met Trp Ser Ala Ala Gly Glu Phe
130         135

```

&lt;210&gt; 1653

&lt;211&gt; 398

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1653

```

ccagcctctc tccgaccgcg tcctttcttc gccatacgg cacccaatgt cgcgtcacca
60
tcacccgcgc acatggccat cgctccaccg gacgagttga gtgacaagat ccggtgcatt
120

```

ctgcgcaccc ttgaacctgg tgacagtgtg aaggagattc tcaacacgtc gcgtgtcgtc  
 180  
 ggcattgacg tccagagcag cctgcttatt gctgggtgctc agcatctgta cttgttggac  
 240  
 gattacttcc agcgtccgaa cggtgaaatc gtcaatgtct gggaagctcc gccacacgag  
 300  
 cgcgatgcct tgatcgtggc ggccggtgtc gcacaggtgg cacaaagcag cacacccgtg  
 360  
 cagatatggc gctgggaaca gctccgactt tgtctaga  
 398

<210> 1654

<211> 132

<212> PRT

<213> Homo sapiens

<400> 1654

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ala | Ser | Leu | Arg | Pro | Arg | Pro | Ser | Ser | Gly | His | Thr | Ala | Pro | Asn |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Val | Ala | Ser | Pro | Ser | Pro | Ala | His | Met | Ala | Ile | Ala | Pro | Pro | Asp | Glu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Leu | Ser | Asp | Lys | Ile | Arg | Cys | Ile | Leu | Arg | Thr | Leu | Glu | Pro | Gly | Asp |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ser | Val | Lys | Glu | Ile | Leu | Asn | Thr | Ser | Arg | Val | Val | Gly | Ile | Asp | Val |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Gln | Ser | Ser | Leu | Leu | Ile | Ala | Gly | Ala | Gln | His | Leu | Tyr | Leu | Leu | Asp |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Asp | Tyr | Phe | Gln | Arg | Pro | Asn | Gly | Glu | Ile | Val | Asn | Val | Trp | Glu | Ala |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Pro | Pro | His | Glu | Arg | Asp | Ala | Leu | Ile | Val | Ala | Ala | Gly | Val | Ala | Gln |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Val | Ala | Gln | Ser | Ser | Thr | Pro | Val | Gln | Ile | Trp | Arg | Trp | Glu | Gln | Leu |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     |     | 125 |     |     |
| Arg | Leu | Cys | Leu |     |     |     |     |     |     |     |     |     |     |     |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

<210> 1655

<211> 1115

<212> DNA

<213> Homo sapiens

<400> 1655

nccctgacct gacctgtcct cgccatggcc gagggcgcct ccggcgccgg gggcacgtcc  
 60  
 ctggagggcg agcgtggcaa gagggccccc ccggagggcg agcctgcagc cccggcgctcc  
 120  
 ggagttcttg ataagctttt cggaaagcgg ctctctgcagg ctggctgcta cctgggtgtcc  
 180  
 cacaaggcgt ggatgaagac ggtgcctaca gagaactgcg acgtgctgat gaccttccca  
 240  
 gacacgaccg atgaccacac gctgctatgg ctgctgaacc acatccgcgt gggcattccc  
 300  
 gagctcatcg tgcaagtccg ccaccaccgc cacacgcgtg cctacgcett ctttgtcacc  
 360

gccacgtatg agagcctact ccgagggggcc gacgagctgg gtctgcgcaa agcagtgaag  
 420  
 gccgagtttg gcgggggcac ccgcggcttc tcctgcgagg aggactttat ctatgagaat  
 480  
 gtggagagcg agctacgctt cttcacctcc caggaacgcc agagcatcat ccgcttctgg  
 540  
 ctgcagaatt tgcgtgcaa gcagggagaa gcactccaca acgtgcgctt cctggaggac  
 600  
 cagccaatca tcccggagct ggcagcacgt gggatcatcc agcagggtgtt ccctgtccac  
 660  
 gagcagcgta ttctgaaccg cctcatgaag tcatgggtgc aggccgtgtg tgaaaaccag  
 720  
 cctctagatg acatctgtga ttactttggt gtgaaaattg ccatgtactt cgcttggtg  
 780  
 ggcttctaca cgctggctat ggtataccca gctgtcttcg ggtctgtcct gtacacattc  
 840  
 acagaggctg atcagacaag ccgggatgtt tcctgcgtgg tctttgccct cttcaacgtg  
 900  
 atctggtcga cgctgttctt ataggaatgg aagcgtatag gggctgagct gggatataat  
 960  
 tgggggacgc tggactcatc ctgggaagcc gtggaggagc cagccccca gttcagggtgc  
 1020  
 gtgcgacgta tcatcccat cactcgggcc gaggagttct actaccgcc ctggaagcgg  
 1080  
 ctgctcttcc agctgcttgt tagcctccgc ctgtg  
 1115

<210> 1656

<211> 299

<212> PRT

<213> Homo sapiens

<400> 1656

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Glu | Ala | Ala | Ser | Gly | Ala | Gly | Gly | Thr | Ser | Leu | Glu | Gly | Glu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Arg | Gly | Lys | Arg | Pro | Pro | Pro | Glu | Gly | Glu | Pro | Ala | Ala | Pro | Ala | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gly | Val | Leu | Asp | Lys | Leu | Phe | Gly | Lys | Arg | Leu | Leu | Gln | Ala | Gly | Arg |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Tyr | Leu | Val | Ser | His | Lys | Ala | Trp | Met | Lys | Thr | Val | Pro | Thr | Glu | Asn |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Cys | Asp | Val | Leu | Met | Thr | Phe | Pro | Asp | Thr | Thr | Asp | Asp | His | Thr | Leu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Leu | Trp | Leu | Leu | Asn | His | Ile | Arg | Val | Gly | Ile | Pro | Glu | Leu | Ile | Val |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Gln | Val | Arg | His | His | Arg | His | Thr | Arg | Ala | Tyr | Ala | Phe | Phe | Val | Thr |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Ala | Thr | Tyr | Glu | Ser | Leu | Leu | Arg | Gly | Ala | Asp | Glu | Leu | Gly | Leu | Arg |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Lys | Ala | Val | Lys | Ala | Glu | Phe | Gly | Gly | Gly | Thr | Arg | Gly | Phe | Ser | Cys |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Glu | Glu | Asp | Phe | Ile | Tyr | Glu | Asn | Val | Glu | Ser | Glu | Leu | Arg | Phe | Phe |
| 145 |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     | 160 |     |
| Thr | Ser | Gln | Glu | Arg | Gln | Ser | Ile | Ile | Arg | Phe | Trp | Leu | Gln | Asn | Leu |



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          165          170          175
Arg Ala Lys Gln Gly Glu Ala Leu His Asn Val Arg Phe Leu Glu Asp
          180          185          190
Gln Pro Ile Ile Pro Glu Leu Ala Ala Arg Gly Ile Ile Gln Gln Val
          195          200          205
Phe Pro Val His Glu Gln Arg Ile Leu Asn Arg Leu Met Lys Ser Trp
          210          215          220
Val Gln Ala Val Cys Glu Asn Gln Pro Leu Asp Asp Ile Cys Asp Tyr
          225          230          235          240
Phe Gly Val Lys Ile Ala Met Tyr Phe Ala Trp Leu Gly Phe Tyr Thr
          245          250          255
Ser Ala Met Val Tyr Pro Ala Val Phe Gly Ser Val Leu Tyr Thr Phe
          260          265          270
Thr Glu Ala Asp Gln Thr Ser Arg Asp Val Ser Cys Val Val Phe Ala
          275          280          285
Leu Phe Asn Val Ile Trp Ser Thr Leu Phe Leu
          290          295

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<210> 1657  
 <211> 333  
 <212> DNA  
 <213> Homo sapiens

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<400> 1657
tgtagaggct cgaggtcatc cggaccatgt ggtccaggac gcccccgctc tccgggcccc
60
gcacggagac gggcgctcag cacggacagc acgcagtctg tgagcctctg caggcagttc
120
ttggagcccg cgggcttccc gcgccgcttc agggggcggg cggcagctcg ggccggtact
180
tctcccaaaa ctgctccggg caggggcgct ccagcagcct ctgcatgaga cggacggcat
240
ccacgcggcc cgtgtaagtg gccactcct gggcgacat tccacggcg ggggtaccctc
300
gcgtggacat ccgccctgc tagcatcagg gct
333

```

<210> 1658  
 <211> 108  
 <212> PRT  
 <213> Homo sapiens

```

<400> 1658
Met Leu Ala Gly Ala Asp Val His Ala Arg Val Pro Pro Pro Trp Asn
 1          5          10          15
Val Ala Ala Gly Val Gly His Leu His Gly Pro Arg Gly Cys Arg Pro
          20          25          30
Ser His Ala Glu Ala Ala Gly Ala Pro Leu Pro Gly Ala Val Leu Gly
          35          40          45
Glu Val Pro Ala Arg Ala Ala Arg Pro Leu Lys Arg Arg Gly Lys
          50          55          60
Pro Ala Gly Ser Lys Asn Cys Leu Gln Arg Leu Thr Asp Cys Val Leu
65          70          75          80
Ser Val Leu Thr Pro Arg Leu Arg Ala Gly Pro Gly Gly Arg Gly Arg

```

85 90 95  
 Pro Gly Pro His Gly Pro Asp Asp Leu Glu Pro Leu  
 100 105

<210> 1659  
 <211> 382  
 <212> DNA  
 <213> Homo sapiens

<400> 1659  
 nnaagcttat ttgttattac taatattttc cgtgaccaga tgggccgcta tgggtgagatt  
 60  
 tacacaactt acaagatgat tttggatgct attcgtaagg tgcctactgc cactgttctc  
 120  
 cttaatggag acagtccact tttctacaag ccagctattc caaatcctgt acagtatttt  
 180  
 ggttttgact tggagaaagg cccagcccaa ctggctcact ataataccga aggaattctc  
 240  
 tgtcccgaact gccaaaggcat cctcaaatat gagcataata cctatgcaaa cttggggcgcc  
 300  
 tatatctgtg aagactgtgg atgtaaactg cctgatctcg actatcgctt gacagaactg  
 360  
 gttgagttaa ccaacaatcg cn  
 382

<210> 1660  
 <211> 127  
 <212> PRT  
 <213> Homo sapiens

<400> 1660  
 Xaa Ser Leu Phe Val Ile Thr Asn Ile Phe Arg Asp Gln Met Gly Arg  
 1 5 10 15  
 Tyr Gly Glu Ile Tyr Thr Thr Tyr Lys Met Ile Leu Asp Ala Ile Arg  
 20 25 30  
 Lys Val Pro Thr Ala Thr Val Leu Leu Asn Gly Asp Ser Pro Leu Phe  
 35 40 45  
 Tyr Lys Pro Ala Ile Pro Asn Pro Val Gln Tyr Phe Gly Phe Asp Leu  
 50 55 60  
 Glu Lys Gly Pro Ala Gln Leu Ala His Tyr Asn Thr Glu Gly Ile Leu  
 65 70 75 80  
 Cys Pro Asp Cys Gln Gly Ile Leu Lys Tyr Glu His Asn Thr Tyr Ala  
 85 90 95  
 Asn Leu Gly Ala Tyr Ile Cys Glu Asp Cys Gly Cys Lys Arg Pro Asp  
 100 105 110  
 Leu Asp Tyr Arg Leu Thr Glu Leu Val Glu Leu Thr Asn Asn Arg  
 115 120 125

<210> 1661  
 <211> 524  
 <212> DNA  
 <213> Homo sapiens

<400> 1661

acgcgtcgat gatcatggag aagacgcggg ccggctcctt gcctgtgacc ttcttgata  
 60  
 gctgcgggta gtagagctcc aggctctcga ggaaggccac gtagcccttg tggccgggtcc  
 120  
 gctgcaggat gtccaggagc acaccactt tccgtttgcg gatgaccagg ttgggggtcgc  
 180  
 tgagcacctg ctctcatca tcagggttca ggaccttgca ctgccgcagg taagggtgtga  
 240  
 tgcgtgaggg gtcgatgacc gaggtgagcg tcaccggaa gccctccagg acgttccagc  
 300  
 actcgtcatc gttctcgtag tccgacatgg cctcagcagg caggctgggg agtgtggggc  
 360  
 agtgctgaga gcatgccgg ctctgcccc caccggggc cagctccac tccttctcag  
 420  
 acgctgggccc agggctctcg tcagggcac gagggggatc agcccaggcg catccaggag  
 480  
 aggtgccag ctccgtgtcc catccacgc ttgatcgtg catg  
 524

<210> 1662

<211> 174

<212> PRT

<213> Homo sapiens

<400> 1662

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gln | Arg | Ser | Ser | Val | Gly | Trp | Asp | Thr | Glu | Leu | Gly | Thr | Ser | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Gly | Cys | Ala | Trp | Ala | Asp | Pro | Pro | Arg | Cys | Pro | Asp | Glu | Ser | Pro | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     | 30  |     |     |     |
| Pro | Ala | Ser | Glu | Lys | Glu | Trp | Glu | Leu | Gly | Pro | Gly | Gly | Gly | Arg | Ser |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Arg | His | Arg | Ser | Gln | His | Cys | Pro | Thr | Leu | Pro | Ser | Leu | Pro | Ala | Glu |
|     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |
| Ala | Met | Ser | Asp | Tyr | Glu | Asn | Asp | Asp | Glu | Cys | Trp | Asn | Val | Leu | Glu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Gly | Phe | Arg | Val | Thr | Leu | Thr | Ser | Val | Ile | Asp | Pro | Ser | Arg | Ile | Thr |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Pro | Tyr | Leu | Arg | Gln | Cys | Lys | Val | Leu | Asn | Pro | Asp | Asp | Glu | Glu | Gln |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Val | Leu | Ser | Asp | Pro | Asn | Leu | Val | Ile | Arg | Lys | Arg | Lys | Val | Gly | Val |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Leu | Leu | Asp | Ile | Leu | Gln | Arg | Thr | Gly | His | Lys | Gly | Tyr | Val | Ala | Phe |
|     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |     |
| Leu | Glu | Ser | Leu | Glu | Leu | Tyr | Tyr | Pro | Gln | Leu | Tyr | Lys | Lys | Val | Thr |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Gly | Lys | Glu | Pro | Ala | Arg | Val | Phe | Ser | Met | Ile | Ile | Asp | Ala |     |     |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     |     |     |

<210> 1663

<211> 321

<212> DNA

<213> Homo sapiens

<400> 1663

nnagtacttg tcatgattac gcctagtttg ggtatctatt tctctcagcg ttctcagatc  
 60  
 tcccgaaccc aagacgacga ggctcggaca cgcgcttcta tctcgaccct tcaagacgag  
 120  
 gtcaagaggt ggcacgatcc cgactacgtc cgtgctcagg cgcgctccca gctcggctgg  
 180  
 gtgatgccgg gcgaaactgg gtatcaggtc attggagaaa acggtaaggt cattggatcg  
 240  
 acgacttctt tggacgaaaa agatccggcg agtgaagcca gcgctgacgc tcggtggtgg  
 300  
 caagaggctt gcggatcagt c  
 321

<210> 1664

<211> 107

<212> PRT

<213> Homo sapiens

<400> 1664

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Val | Leu | Val | Met | Ile | Thr | Pro | Ser | Leu | Gly | Ile | Tyr | Phe | Ser | Gln |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Arg | Ser | Gln | Ile | Ser | Arg | Thr | Gln | Asp | Asp | Glu | Ala | Arg | Thr | Arg | Ala |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ser | Ile | Ser | Thr | Leu | Gln | Asp | Glu | Val | Lys | Arg | Trp | His | Asp | Pro | Asp |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Tyr | Val | Arg | Ala | Gln | Ala | Arg | Ser | Gln | Leu | Gly | Trp | Val | Met | Pro | Gly |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Glu | Thr | Gly | Tyr | Gln | Val | Ile | Gly | Glu | Asn | Gly | Lys | Val | Ile | Gly | Ser |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |     |
| Thr | Thr | Ser | Leu | Asp | Glu | Lys | Asp | Pro | Ala | Ser | Glu | Ala | Ser | Ala | Asp |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Ala | Arg | Trp | Trp | Gln | Glu | Ala | Cys | Gly | Ser | Val |     |     |     |     |     |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     |     |     |     |

<210> 1665

<211> 431

<212> DNA

<213> Homo sapiens

<400> 1665

gcttccgaac tcatcaagaa gctcaagagg tataaaatgg ttttgcgctc taccggcggc  
 60  
 ggccccgacta tctccggtgg tgaagtactc atgcaacgcg cttttgcgtg gaacttgctc  
 120  
 atgagtgcta agtcgatggg cattcatacc tgtatcgata cctccggttt tttgggggct  
 180  
 gcggcaacag atgacttttt agagtctggt gatttggtgt tgctcgacgt caaatcggga  
 240  
 gatgaagaaa tctaccgtgc cctcaccggc agagcggtgc aacctaccat cgattttggt  
 300  
 gatcgcttca ccgcgctcgg taaagaaatc tggattcggt tcgttggtgt ccccgatac  
 360  
 accgactcgg tagagaacgt ggaaaagggt gccgatatcg tccgcagatg gcgcaccgct  
 420

gtttcacgcg t  
431

<210> 1666  
<211> 143  
<212> PRT  
<213> Homo sapiens

<400> 1666  
Ala Ser Glu Leu Ile Lys Lys Leu Lys Arg Tyr Lys Met Val Leu Arg  
1 5 10 15  
Ser Thr Gly Gly Pro Thr Ile Ser Gly Gly Glu Val Leu Met Gln  
20 25 30  
Arg Ala Phe Ala Trp Asn Leu Leu Met Ser Ala Lys Ser Met Gly Ile  
35 40 45  
His Thr Cys Ile Asp Thr Ser Gly Phe Leu Gly Ala Ala Ala Thr Asp  
50 55 60  
Asp Phe Leu Glu Ser Val Asp Leu Val Leu Leu Asp Val Lys Ser Gly  
65 70 75 80  
Asp Glu Glu Ile Tyr Arg Ala Leu Thr Gly Arg Ala Leu Gln Pro Thr  
85 90 95  
Ile Asp Phe Gly Asp Arg Leu Thr Ala Leu Gly Lys Glu Ile Trp Ile  
100 105 110  
Arg Phe Val Val Val Pro Gly Tyr Thr Asp Ser Val Glu Asn Val Glu  
115 120 125  
Lys Val Ala Asp Ile Val Arg Arg Trp Arg Thr Ala Val Ser Arg  
130 135 140

<210> 1667  
<211> 370  
<212> DNA  
<213> Homo sapiens

<400> 1667  
tccgctgaga ccagcgttgg tgacttccca ggtgagactg tccgcacccat ggccaagatc  
60  
gttgagtcta ctgaggcccg tggcttggac aagatcgcca agatcgactg ggatccgcac  
120  
accaccagtg gcatcatgtc gaaggcagct gctgagatcg ctgagcgcgc cgaggccaag  
180  
ttcatcgagg cctttaccaa gtccggtgac accgcccgtc gtatcgctcg tctgcgtccg  
240  
agcaccgccg tcatcggttt cacctctgat gagaccacga ccaagaccct cgcttgggtc  
300  
tggggcgctc acgccgtcgt taccgccgtg ttaagaatg cggaggagct gtaccgctgg  
360  
gttaacgcgt  
370

<210> 1668  
<211> 123  
<212> PRT  
<213> Homo sapiens

&lt;400&gt; 1668

```

Ser Ala Glu Thr Ser Val Gly Asp Phe Pro Gly Glu Thr Val Arg Thr
 1           5           10           15
Met Ala Lys Ile Val Glu Ser Thr Glu Ala Arg Gly Leu Asp Lys Ile
      20           25           30
Ala Lys Ile Asp Trp Asp Pro His Thr Thr Ser Gly Ile Met Ser Lys
      35           40           45
Ala Ala Ala Glu Ile Ala Glu Arg Ala Glu Ala Lys Phe Ile Val Ala
      50           55           60
Phe Thr Lys Ser Gly Asp Thr Ala Arg Arg Ile Ala Arg Leu Arg Pro
65           70           75           80
Ser Thr Pro Leu Ile Val Phe Thr Ser Asp Glu Thr Thr Thr Lys Thr
      85           90           95
Leu Ala Trp Val Trp Gly Ala His Ala Val Val Thr Pro Val Phe Lys
      100          105          110
Asn Ala Glu Glu Leu Tyr Arg Trp Val Asn Ala
      115          120

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&lt;210&gt; 1669

&lt;211&gt; 1491

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1669

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ggatcctgca gtggtgatct gtcacgtca cgtcacagaa ctgaacatgg aaatgaacaa
60
cgaaaactcc acccccttct caaacgagtt attcctagct ccgccccag tccttgctc
120
tccagcctt ggtggttaatt agcttgaaag tgggaacgag agtgcggtcc gcaaagaaag
180
gacttctggt tagacactga aatacaaaaca gactgccaac gagctctggg caaagctgcc
240
ccgtcttctt ttttcgaaag accctcaaaa actgccttct cttctgctac caaaacttgg
300
gccctagaaa gtggctgcgg agtggagcag atggacatca ctgagaatgg tagaggaggg
360
gctgtgtttt ctgaggggga gtcattggcag cttgtgctgg gggccaggaa gggaaaaaac
420
caatctggca ttcaggttgt ggaaggcaaa gtgaaacaag aagtcatttg ggaaaatatt
480
atattataaa cacatagaat aatatgtaca cgctcatata catcccaaag agaagcctca
540
aggagtcccg tttcttctca aaagaaactt cactatgata aagcattcct atagtgggaa
600
ttaactacaa tgaaataatt taacaatttc atttatgcta tatctgtgtc cactacagag
660
tctacggtga aggctgtgtg gagcgagtgt gtctagtgga ctggaacacc aacgcgttct
720
tcaaaaatag gcaatgacct gtttttttct attcacattt acaatagcta cacagtgatg
780
aaacgcagac tgaaaaatca aatggcagga cgatggaact gtcgtcaagg ttctcagact
840
tgtggcttct gcacctgtta tacttttgga tacgagttag ctccacttag cttcgttaag
900

```

attagaaatt tccatgaaac acttaccac atataaattc tgtgtaaagc tttatttttt  
 960  
 tccccaccta ctttaatttt ttttaaaaag tgaaataaga ggaaaaactc ttataaaata  
 1020  
 taagggttaa catagagag agcgaggaac accccggagg ctgccggtgc gtgtggcttc  
 1080  
 atgtttctgt gctacatgag tctagtgtcc tcatcttcca ttgtgacaac ctttctcccc  
 1140  
 ccatcacact gtcaatgagc tctaggcaaa gctgccccgt ttgcttttaa cctaagggat  
 1200  
 gctgtgggtt gggtgactac atttgactac caccactgaa ggcggcggac gtctgaagcg  
 1260  
 gctggatacc gcaacgatgg aaaatcaggc gaggtactag cgtggagggc cgggctgcca  
 1320  
 ggtcaaggtc gtctgggttc tcaggagcca gtctgtgcca cagaaccatc ggcagctgcc  
 1380  
 ttcgtaaggc acctcggtct ggcattcgga aaaccacccc atcttgccag agtcccttgg  
 1440  
 tccttgggta gcaaaagccg tatgcatct aaatcaagct ttcaatcatg a  
 1491

<210> 1670

<211> 132

<212> PRT

<213> Homo sapiens

<400> 1670

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Pro | Asp | Trp | Phe | Phe | Pro | Phe | Leu | Ala | Pro | Ser | Thr | Ser | Cys | His |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Asp | Ser | Pro | Ser | Glu | Asn | Thr | Ala | Pro | Pro | Leu | Pro | Phe | Ser | Val | Met |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ser | Ile | Cys | Ser | Thr | Pro | Gln | Pro | Leu | Ser | Arg | Ala | Gln | Val | Leu | Val |
|     | 35  |     |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |
| Ala | Glu | Gly | Lys | Ala | Val | Phe | Glu | Gly | Leu | Ser | Lys | Lys | Glu | Asp | Gly |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Ala | Ala | Leu | Pro | Arg | Ala | Arg | Trp | Gln | Ser | Val | Cys | Ile | Ser | Val | Ser |
| 65  |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     | 80  |     |
| Asn | Gln | Lys | Ser | Phe | Leu | Cys | Gly | Pro | His | Ser | Arg | Ser | His | Phe | Gln |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ala | Asn | Tyr | His | Gln | Gly | Trp | Glu | Arg | Gln | Gly | Leu | Gly | Ala | Glu | Leu |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Gly | Ile | Thr | Arg | Leu | Arg | Arg | Gly | Trp | Ser | Phe | Arg | Cys | Ser | Phe | Pro |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Cys | Ser | Val | Leu |     |     |     |     |     |     |     |     |     |     |     |     |
|     |     | 130 |     |     |     |     |     |     |     |     |     |     |     |     |     |

<210> 1671

<211> 432

<212> DNA

<213> Homo sapiens

<400> 1671

gcgcgcggg gcgggaggac gccagtcgtc ttcccgcgcc tcaccacgac acgaccatta  
 60

tcgcgacgaa ggaagcccat ggctgaaacc acatcgccgg cacagcggaa acccacggcg  
 120  
 gcatcccgca tgaagccggg gtcgcgggtc ggggacacga ttttcgctgg cgctcgctcg  
 180  
 gttattgccca tagccctggc cgtcatcgtc atcctgatgt tcgtcttcct catgaagacg  
 240  
 gcagccccga cgttggtggc taacaccgat aactttttca cgtcccgggc ttggacaacg  
 300  
 gatcagaacc cgccggcctt tggatatccag gccctgctat ggacgacagt catctcatcc  
 360  
 ctgcttgccc tgetcatcgc agtgccgctc tcggtgggca tcgctctgtt taccaccag  
 420  
 ctgcaccta gg  
 432

<210> 1672  
 <211> 144  
 <212> PRT  
 <213> Homo sapiens

<400> 1672  
 Ala Arg Arg Gly Gly Arg Thr Pro Val Val Phe Pro Pro Leu Thr Thr  
 1 5 10 15  
 Thr Arg Pro Leu Ser Arg Arg Arg Lys Pro Met Ala Glu Thr Thr Ser  
 20 25 30  
 Pro Ala Gln Arg Lys Pro Thr Ala Ala Ser Arg Met Lys Pro Val Ser  
 35 40 45  
 Arg Val Gly Asp Thr Ile Phe Ala Gly Ala Ser Ser Val Ile Ala Ile  
 50 55 60  
 Ala Leu Ala Val Ile Val Ile Leu Met Phe Val Phe Leu Met Lys Thr  
 65 70 75 80  
 Ala Ala Pro Thr Leu Leu Ala Asn Thr Asp Asn Phe Phe Thr Ser Arg  
 85 90 95  
 Ala Trp Thr Thr Asp Gln Asn Pro Pro Ala Phe Gly Ile Gln Ala Leu  
 100 105 110  
 Leu Trp Thr Thr Val Ile Ser Ser Leu Leu Ala Leu Leu Ile Ala Val  
 115 120 125  
 Pro Leu Ser Val Gly Ile Ala Leu Phe Ile Thr Gln Leu Ala Pro Arg  
 130 135 140

<210> 1673  
 <211> 401  
 <212> DNA  
 <213> Homo sapiens

<400> 1673  
 tcgcgagcac actccagcct ctggggcgctc tgccagggcc tctgtgtttt gatatactct  
 60  
 gacctggcag tgaagctgct gatgaatgca cgacaaagac cagtttgctc cgtaacccca  
 120  
 ggctcccagc gtctttttcca tgagccaaag gcctggtcct ggaggggggt gccctgcagc  
 180  
 tctgctggcc ttcttccagg ggagttcatt gctgggggtg gccctgcagg gacctccact  
 240



gtgctgggga ggggaagaag aaggatgcaa cagggggagg ggagaatttg agaaaatagg  
 300  
 atgcaaattc tccacttggt aataaagaaa tagagagcca ttgctaagaa ctatgtttac  
 360  
 gcagggttag tgctgggacc cagaaccagt caactgggtt t  
 401

<210> 1674  
 <211> 113  
 <212> PRT  
 <213> Homo sapiens

<400> 1674  
 Met Ala Leu Tyr Phe Phe Ile His Lys Trp Arg Ile Cys Ile Leu Phe  
 1 5 10 15  
 Ser Gln Ile Leu Pro Ser Pro Cys Cys Ile Leu Leu Leu Pro Leu Pro  
 20 25 30  
 Ser Thr Val Glu Val Pro Ala Gly Pro Pro Pro Ala Met Asn Ser Pro  
 35 40 45  
 Gly Arg Arg Pro Ala Glu Leu Gln Gly Thr Pro Leu Gln Asp Gln Ala  
 50 55 60  
 Phe Gly Ser Trp Lys Arg Arg Trp Glu Pro Gly Val Thr Glu Gln Thr  
 65 70 75 80  
 Gly Leu Cys Arg Ala Phe Ile Ser Ser Phe Thr Ala Arg Ser Glu Tyr  
 85 90 95  
 Ile Lys Thr Gln Arg Pro Trp Gln Thr Pro Gln Arg Leu Glu Cys Ala  
 100 105 110  
 Arg

<210> 1675  
 <211> 500  
 <212> DNA  
 <213> Homo sapiens

<400> 1675  
 gccggcgcac ccacctggga cgtggtgaaa tcggcaaac tcacctctt agctacctgc  
 60  
 gcgccaaccg cacgggcagc ctccacacg ccctctagag cgctgctgga cagaatggct  
 120  
 tgattgtttg gcatgctctc aggatacccg tttagccagg aaacaccggt aggcttgcta  
 180  
 ctatgcgagc agccgacgca cgggtagagg gaattccac cacagtcctt cgactccac  
 240  
 ccgcacacgc cctgggaacc gtcacccgcg gtaccaccgg gtcaatcggc tccgcaaagt  
 300  
 cgaccgctgg atgtgccacc accccgcnca tccgcagtgc gctccgtaac gccgtctgca  
 360  
 acaccgtccc ctccgtatct gccgacacct gtgccaacac ttgtaccgat gcatgcaccg  
 420  
 atgcagcaac aggcgctccg ctccgtatcg atctgggata cggcgccgcc ccttggaaca  
 480  
 ctgttgagat ggctacgcgt  
 500

<210> 1676  
 <211> 97  
 <212> PRT  
 <213> Homo sapiens

<400> 1676  
 Arg Glu Phe Pro Pro Gln Ser Leu Ala Leu His Pro His Thr Pro Trp  
 1 5 10 15  
 Glu Pro Ser Pro Ala Val Pro Pro Gly Gln Ser Ala Pro Gln Met Arg  
 20 25 30  
 Pro Leu Asp Val Pro Pro Pro Arg Xaa Ser Ala Val Arg Ser Val Thr  
 35 40 45  
 Pro Ser Ala Thr Pro Ser Pro Pro Tyr Leu Pro Thr Pro Val Pro Thr  
 50 55 60  
 Leu Val Pro Met His Ala Pro Met Gln Gln Gln Ala Leu Arg Ser Leu  
 65 70 75 80  
 Ser Ile Trp Asp Thr Ala Pro Pro Pro Gly Pro Leu Leu Arg Trp Leu  
 85 90 95  
 Arg

<210> 1677  
 <211> 631  
 <212> DNA  
 <213> Homo sapiens

<400> 1677  
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 120  
 cagcaggatg ttgtgaccgc cgtggaatgg gcggcggtac agccgtggtc gaatggtcgg  
 180  
 gtggggcttt tcggtaaatc ctacgatggg gggacggggg cttattgctg caggtaatca  
 240  
 gccgcggggg ttggctgctg tgggtggcgca ggagccagct atggagccct acacttacct  
 300  
 gtataacaat gaggtccttt actacaacgc tattggtacg agcctttctt atgatgagat  
 360  
 tgctgcctcc cccggccgtg tccttcacga cactcccgaa tatatgaaga acagtgtcta  
 420  
 cgagggtggc caccgcatt gcctgtccga caatttgcgt aattctttag accccatccg  
 480  
 tagccacaaa taatgggagg gatcggtctt tccctcacca agacgcataa tttcccccg  
 540  
 gcccttgctt atttccgctg gccttattga ggacaatacg gagcctgatg gtttgggtga  
 600  
 attgttgaag gaccgtaagg ctccgacgcg t  
 631

<210> 1678  
 <211> 78  
 <212> PRT

<213> Homo sapiens

<400> 1678

Xaa His Asp Phe Leu Asn Asp Ala Lys Val Met Glu Ala Gly Tyr Thr  
 1 5 10 15  
 Trp Val Gln Val Asp Leu Arg Gly Thr Gly Ala Ser Thr Gly Cys Leu  
 20 25 30  
 Xaa Leu Glu Trp Ser Xaa Gly Glu Gln Gln Asp Val Val Thr Ala Val  
 35 40 45  
 Glu Trp Ala Ala Val Gln Pro Trp Ser Asn Gly Arg Val Gly Leu Phe  
 50 55 60  
 Gly Lys Ser Tyr Asp Gly Gly Thr Gly Ser Tyr Cys Cys Arg  
 65 70 75

<210> 1679

<211> 531

<212> DNA

<213> Homo sapiens

<400> 1679

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 120  
 cagctgatct gccctatctg cctggagatg tttaccaagc cagtggatcat cttgccgtgc  
 180  
 cagcacaacc tgtgccgaa gtgtgccaat gacatcttcc aggctgcaaa tccctactgg  
 240  
 accagccggg gcagctcagt gtccatgtct ggaggccgtt tccgctgccc tacctgccgc  
 300  
 cacgaggtga tcatggatcg tcacggagtg tacggcctgc agaggaaacct gctgggtggag  
 360  
 aacatcatcg acatctacaa acaggagtgc tccagtcggc cgctgcagaa gggcagtcac  
 420  
 cccatgtaca aggagcacga agatgagaaa atcaacatct actgtctcac gtgtgaggtg  
 480  
 cccacctgct ccatgtgcaa ggtgtttggg atccacaagg cctgcgaggt g  
 531

<210> 1680

<211> 143

<212> PRT

<213> Homo sapiens

<400> 1680

Met Glu Asn Leu Glu Lys Gln Leu Ile Cys Pro Ile Cys Leu Glu Met  
 1 5 10 15  
 Phe Thr Lys Pro Val Val Ile Leu Pro Cys Gln His Asn Leu Cys Arg  
 20 25 30  
 Lys Cys Ala Asn Asp Ile Phe Gln Ala Ala Asn Pro Tyr Trp Thr Ser  
 35 40 45  
 Arg Gly Ser Ser Val Ser Met Ser Gly Gly Arg Phe Arg Cys Pro Thr  
 50 55 60  
 Cys Arg His Glu Val Ile Met Asp Arg His Gly Val Tyr Gly Leu Gln

```

65              70              75              80
Arg Asn Leu Leu Val Glu Asn Ile Ile Asp Ile Tyr Lys Gln Glu Cys
      85              90              95
Ser Ser Arg Pro Leu Gln Lys Gly Ser His Pro Met Tyr Lys Glu His
      100             105             110
Glu Asp Glu Lys Ile Asn Ile Tyr Cys Leu Thr Cys Glu Val Pro Thr
      115             120             125
Cys Ser Met Cys Lys Val Phe Gly Ile His Lys Ala Cys Glu Val
      130             135             140

```

<210> 1681  
 <211> 396  
 <212> DNA  
 <213> Homo sapiens

```

<400> 1681
gagttccaca actgcaggac agatgacaag acgttccaat gtgagatgtg tttcagattc
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ttttccacca acagcaacct ctccaagcac aagaagaagc acggcgacaa gaagtttgcc
120
tgtgaggtct gcagcaagat gttctaccgc aaggacgtca tgctggacca ccagcgccgg
180
cacnctggaa ggagtgcggc gagtgaagcg nnagaggacc tggaggccgg tggggagaac
240
ctggtccggtt acaagaagga gccttccggg tgcccgtgtg gtggcaagggt gttctcctgc
300
cggagcaata tgaacaagca cctgctcacc cacggcgaca agaagtacac ctgcgagatc
360
tgcggggcgca agttcttccg cgtggatgtg ctcagg
396

```

<210> 1682  
 <211> 132  
 <212> PRT  
 <213> Homo sapiens

```

<400> 1682
Glu Phe His Asn Cys Arg Thr Asp Asp Lys Thr Phe Gln Cys Glu Met
1      5      10      15
Cys Phe Arg Phe Phe Ser Thr Asn Ser Asn Leu Ser Lys His Lys Lys
      20      25      30
Lys His Gly Asp Lys Lys Phe Ala Cys Glu Val Cys Ser Lys Met Phe
      35      40      45
Tyr Arg Lys Asp Val Met Leu Asp His Gln Arg Arg His Xaa Gly Arg
      50      55      60
Ser Ala Ala Ser Glu Ala Xaa Glu Asp Leu Glu Ala Gly Gly Glu Asn
65      70      75      80
Leu Val Arg Tyr Lys Lys Glu Pro Ser Gly Cys Pro Val Cys Gly Lys
      85      90      95
Val Phe Ser Cys Arg Ser Asn Met Asn Lys His Leu Leu Thr His Gly
      100     105     110
Asp Lys Lys Tyr Thr Cys Glu Ile Cys Gly Arg Lys Phe Phe Arg Val
      115     120     125
Asp Val Leu Arg

```

130

<210> 1683  
 <211> 676  
 <212> DNA  
 <213> Homo sapiens

<400> 1683  
 nncggccgga caggtcccca gcagccccgc ccaacatgga cccagacccc caggcgggcg  
 60  
 tgcaggtggg catgcgggtg gtgcgcggcg tggaccggaa gtggggccag caggacggcg  
 120  
 gcgagggcgg cgtgggcacg gtggtggagc ttggccgcca cggcagcccc tcgacacccg  
 180  
 accgcacagt ggtcgtgcag tgggaccagg gcacgcgcac caactaccgc gccggctacc  
 240  
 agggcgcgca cgacctgctg ctgtacgaca acgcccagat cggcgtccgg caccccaaca  
 300  
 tcattctgtga ctgctgcaag aagcacgggc tgcgggggat gcgctggaag tgccgtgtgt  
 360  
 gcctggacta cgacctctgc acgcagtgtt acatgcacaa caagcatgag ctcgcccacg  
 420  
 ccttcgaccg ctacgagacc gctcactcgc gccctgtcac actgagtccc cgccaggggc  
 480  
 tcccagggat cccactaagg ggcattcttc agggagcgaa ggtggtgcga ggccccgact  
 540  
 gggagtgggg ctcacaggat ggtgagtggg ggcagagggg cggggtcagg gctgggctgt  
 600  
 ggctggctca tggctcagcc ttagcctgct gggggggcct ctttccccag gaggggaaggg  
 660  
 aaaccggggc gccgga  
 676

<210> 1684  
 <211> 154  
 <212> PRT  
 <213> Homo sapiens

<400> 1684  
 Xaa Gly Arg Thr Gly Pro Glu Gln Pro Arg Pro Thr Trp Thr Gln Thr  
 1 5 10 15  
 Pro Arg Arg Ala Cys Arg Trp Ala Cys Gly Trp Cys Ala Ala Trp Thr  
 20 25 30  
 Gly Ser Gly Ala Ser Arg Thr Ala Ala Arg Ala Ala Trp Ala Arg Trp  
 35 40 45  
 Trp Ser Leu Ala Ala Thr Ala Ala Pro Arg His Pro Thr Ala Gln Trp  
 50 55 60  
 Ser Cys Ser Gly Thr Arg Ala Arg Ala Pro Thr Thr Ala Pro Ala Thr  
 65 70 75 80  
 Arg Ala Arg Thr Thr Cys Cys Cys Thr Thr Thr Pro Arg Ser Ala Ser  
 85 90 95  
 Gly Thr Pro Thr Ser Ser Val Thr Ala Ala Arg Ser Thr Gly Cys Gly  
 100 105 110  
 Gly Cys Ala Gly Ser Ala Val Cys Ala Trp Thr Thr Thr Ser Ala Arg

|     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|
|     | 115 |     | 120 |     | 125 |
| Ser | Ala | Thr | Cys | Thr | Thr |
|     |     | Ser | Met | Ser | Ser |
|     |     | Pro | Thr | Pro | Ser |
|     |     | Thr | Ala | Thr | Ala |
|     | 130 |     | 135 |     | 140 |
| Thr | Arg | Pro | Leu | Thr | Arg |
|     |     | Ala | Leu | Ser | His |
| 145 |     |     | 150 |     |     |

&lt;210&gt; 1685

&lt;211&gt; 2740

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1685

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ngaggaggag ccggcggcgg ctccggggaa agggaggggg gcgctccgca gccgccgccg
60
cccaggggct ggcgagggaa aggcgtacgc gctcagcaga ggggcggcag cggcggggag
120
ggggcctccc cttctccatc ctctctttct gcgggcaaaa ccccaggaac cggcagcaga
180
aactccggaa gcggcggtgc ggggggcggc agcgggtggtg gagggagcta ctggaaagaa
240
ggatgtctgc agtctgagct catccagttc catctcaaga aggagcgggc ggcagcggcg
300
gcggccgcgg ctcatagtca cgctaagaac ggcggcggca gcagtagccg cagctccccg
360
gtgtctggcc cccctgccgt ttgcgagacc ctggccgtcg cctccgcctc cccaatggcg
420
gcggcggcgg agggcccccgc gcagagcgcga gagggcagcg cgagcggcgg gggcatgcag
480
gcggcagcgc ccccttcgtc gcagccgcac ccgcagcagc tccaagagca ggaagaaatg
540
caagaggaga tggagaagct gcgagaggaa aacgagactc tcaagaacga gatcgatgag
600
ctgagaaccg agatggacga gatgagggac actttcttcg aggaggatgc ctgtcaactg
660
caggaaatgc gccacgagtt ggagagagcc aacaaaaact gccggatcct gcagtaccgc
720
ctccgcaaag ccgagcgcaa aaggctccgc tacgcccaga ccggggaaat cgacggggag
780
ctgttgcgca gcctggagca ggacctcaag gttgcaaagg atgtatctgt gagacttcac
840
catgaattag aaaatgtgga agaaaagaga acaacaacag aagatgaaaa tgagaaactg
900
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960
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gctcaacaga ctcccacaga ggaggacaat gaagatctga agtgccagct gcagtttgtt
1080
aaggaagaag ccgctttgat gagaaagaaa atggccaaga ttgataaaga aaaggacaga
1140
tttgaacacg agctccagaa gtacagatcc ttttatgggg atctggacag tcctttgccc
1200
aaaggagaag ccggaggccc tcccagcact agggaggccg agctcaagct acggctaagg
1260

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ctggtggagg aagaagccaa catcctgggc aggaaaatcg tcgaactgga ggtggagaac  
1320  
agaggcctga aggcggaact ggacgacctt aggggcgatg acnnttcaac ggctcggcca  
1380  
acccgctcat gagggagca gagcgaatcc ctgtcggagc tgccgcagca cctgcagctg  
1440  
gtggaagacg agacggagct gctgcggagg aacgtggccg acctggagga gcagaacaag  
1500  
cgcatacagg cggagctcaa caagtacaag tacaagnntc cggcggccac gacagcgcgc  
1560  
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1620  
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1680  
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1740  
agcgacgccc agagcgacgc gggcaagaag gagagcgacg acgactcgcg gcctccgcac  
1800  
cgcaagcgcg aagggcccat cggcggcgag agcgactcgg aggaggtgnn cgcaacatcc  
1860  
gctgcctcan cgccactcg ctcttctac ccggcgcccg ggccctggcc caagagcttc  
1920  
tccgatcggc agcagatgaa ggacatccgc tcggaggccg agcgctggg caagaccatc  
1980  
gaccggctca tcgccgacac gagcaccatc atcaccgagg cgcgcacnt acgtggccaa  
2040  
cggggacctg ttncggact catggacgag gaggacgacg gcagccgcat ccgggagcac  
2100  
gagctgctct accgcatcaa cgctcagatg aaggccttcc gcaaggagct gcagaccttc  
2160  
atcgaccgcc tcgagggtgcc caagtctgcg gacgaccgcg gcgccgagga gccatttcc  
2220  
gtgagtcaga tgttccagcc tatcatttta cttatttca tcttgtatt attttcatca  
2280  
cttttttaca caacaatatt taaacttgtc ttcttttta cactgttttt tgtactgtaa  
2340  
atctttcatc atttaccatt cattgtagta ttttcagttt gtttattttg ttcacccttc  
2400  
aagacaagaa gtaaaagaag tataatttct gtagtaacca atgctataaa aacactgaag  
2460  
actgcttatt tctttacaaa gatacaactc atcttaccaa gaccaaattc aataagaagc  
2520  
ccaaacacta aaatatttca ggtaagaaag tgtgacattt ttctgtatga attgttttaa  
2580  
tttttacttc ttttttcat cctgtttgtc tcctcttgat aaataattgg catactgaat  
2640  
ataaaaatgg actacatgtc tcataattat ttctcagtag ttcactatta ttattcaaaa  
2700  
gctggacgga cattcacaat ttggtcacat ttccaaaaag  
2740

&lt;210&gt; 1686

&lt;211&gt; 463

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1686

Xaa Gly Gly Ala Gly Gly Gly Ser Gly Glu Arg Glu Gly Gly Ala Pro  
 1 5 10 15  
 Gln Pro Pro Pro Pro Arg Gly Trp Arg Gly Lys Gly Val Arg Ala Gln  
 20 25 30  
 Gln Arg Gly Gly Ser Gly Gly Glu Gly Ala Ser Pro Ser Pro Ser Ser  
 35 40 45  
 Ser Ser Ala Gly Lys Thr Pro Gly Thr Gly Ser Arg Asn Ser Gly Ser  
 50 55 60  
 Gly Val Ala Gly Gly Gly Ser Gly Gly Gly Gly Ser Tyr Trp Lys Glu  
 65 70 75 80  
 Gly Cys Leu Gln Ser Glu Leu Ile Gln Phe His Leu Lys Lys Glu Arg  
 85 90 95  
 Ala Ala Ala Ala Ala Ala Ala Ala Ala Gln Met His Ala Lys Asn Gly Gly  
 100 105 110  
 Gly Ser Ser Ser Arg Ser Ser Pro Val Ser Gly Pro Pro Ala Val Cys  
 115 120 125  
 Glu Thr Leu Ala Val Ala Ser Ala Ser Pro Met Ala Ala Ala Glu  
 130 135 140  
 Gly Pro Gln Gln Ser Ala Glu Gly Ser Ala Ser Gly Gly Gly Met Gln  
 145 150 155 160  
 Ala Ala Ala Pro Pro Ser Ser Gln Pro His Pro Gln Gln Leu Gln Glu  
 165 170 175  
 Gln Glu Glu Met Gln Glu Glu Met Glu Lys Leu Arg Glu Glu Asn Glu  
 180 185 190  
 Thr Leu Lys Asn Glu Ile Asp Glu Leu Arg Thr Glu Met Asp Glu Met  
 195 200 205  
 Arg Asp Thr Phe Phe Glu Glu Asp Ala Cys Gln Leu Gln Glu Met Arg  
 210 215 220  
 His Glu Leu Glu Arg Ala Asn Lys Asn Cys Arg Ile Leu Gln Tyr Arg  
 225 230 235 240  
 Leu Arg Lys Ala Glu Arg Lys Arg Leu Arg Tyr Ala Gln Thr Gly Glu  
 245 250 255  
 Ile Asp Gly Glu Leu Leu Arg Ser Leu Glu Gln Asp Leu Lys Val Ala  
 260 265 270  
 Lys Asp Val Ser Val Arg Leu His His Glu Leu Glu Asn Val Glu Glu  
 275 280 285  
 Lys Arg Thr Thr Thr Glu Asp Glu Asn Glu Lys Leu Arg Gln Gln Leu  
 290 295 300  
 Ile Glu Val Glu Ile Ala Lys Gln Ala Leu Gln Asn Glu Leu Glu Lys  
 305 310 315 320  
 Met Lys Glu Leu Ser Leu Lys Arg Arg Gly Ser Lys Asp Leu Pro Lys  
 325 330 335  
 Ser Glu Lys Lys Ala Gln Gln Thr Pro Thr Glu Glu Asp Asn Glu Asp  
 340 345 350  
 Leu Lys Cys Gln Leu Gln Phe Val Lys Glu Glu Ala Ala Leu Met Arg  
 355 360 365  
 Lys Lys Met Ala Lys Ile Asp Lys Glu Lys Asp Arg Phe Glu His Glu  
 370 375 380  
 Leu Gln Lys Tyr Arg Ser Phe Tyr Gly Asp Leu Asp Ser Pro Leu Pro  
 385 390 395 400  
 Lys Gly Glu Ala Gly Gly Pro Pro Ser Thr Arg Glu Ala Glu Leu Lys



405 410 415  
 Leu Arg Leu Arg Leu Val Glu Glu Glu Ala Asn Ile Leu Gly Arg Lys  
 420 425 430  
 Ile Val Glu Leu Glu Val Glu Asn Arg Gly Leu Lys Ala Glu Leu Asp  
 435 440 445  
 Asp Leu Arg Gly Asp Asp Xaa Ser Thr Ala Arg Pro Thr Arg Ser  
 450 455 460

<210> 1687  
 <211> 326  
 <212> DNA  
 <213> Homo sapiens

<400> 1687  
 gtgcacacag gtgagcgtcc ctacaagtgt ccacactgcg actatgcagg taccagtcg  
 60  
 ggctcgctca agtatcacct tcagcgtcac caccgagagc agaagaacag tgcgggttcc  
 120  
 tgggectccc ccagaacccc cgccaccttc ccagcggggc tcaactgcagc cgcagtcagg  
 180  
 agccaagcca actcaggcct cagccacctg ggtagagggc actgcaagta cccggcctcc  
 240  
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 300  
 aaacggcgat gtggtgaagc cgaact  
 326

<210> 1688  
 <211> 89  
 <212> PRT  
 <213> Homo sapiens

<400> 1688  
 Val His Thr Gly Glu Arg Pro Tyr Lys Cys Pro His Cys Asp Tyr Ala  
 1 5 10 15  
 Gly Thr Gln Ser Gly Ser Leu Lys Tyr His Leu Gln Arg His His Arg  
 20 25 30  
 Glu Gln Lys Asn Ser Ala Gly Ser Trp Ala Ser Pro Arg Thr Pro Ala  
 35 40 45  
 Thr Phe Pro Ala Gly Leu Thr Ala Ala Val Arg Ser Gln Ala Asn  
 50 55 60  
 Ser Gly Leu Ser His Leu Gly Arg Gly His Cys Lys Tyr Pro Ala Ser  
 65 70 75 80  
 Phe Glu Gln His Arg Thr Arg Val Pro  
 85

<210> 1689  
 <211> 301  
 <212> DNA  
 <213> Homo sapiens

<400> 1689  
 nggggaagcc atggctgctt aaggacaatg cactgtcagc tcggtgatgt cttgatttgg  
 60

tctgggattc tgcacttagt aattgcagat aatactcatg tggcgccaag gaaaaaaaaa  
 120  
 ttggcctttt cccagtcctat taagcctaaa caaaccacat cactttacat caggcagatc  
 180  
 atgtgggtacc agaattttcc agtttggcgg actatcttga tcaaataaac taaattattg  
 240  
 ccactgtggc tatctgtgaa agaacacaat gaagaaaatc tggagcctta tctcatactc  
 300  
 a  
 301

<210> 1690  
 <211> 91  
 <212> PRT  
 <213> Homo sapiens

<400> 1690  
 Met His Cys Gln Leu Gly Asp Val Leu Ile Trp Ser Gly Ile Leu His  
 1 5 10 15  
 Leu Val Ile Ala Asp Asn Thr His Val Ala Pro Arg Lys Lys Lys Leu  
 20 25 30  
 Ala Phe Ser Gln Ser Ile Lys Pro Lys Gln Thr Thr Ser Leu Tyr Ile  
 35 40 45  
 Arg Gln Ile Met Trp Tyr Gln Asn Phe Pro Val Trp Arg Thr Ile Leu  
 50 55 60  
 Ile Lys Ser Thr Lys Leu Leu Pro Leu Trp Leu Ser Val Lys Glu His  
 65 70 75 80  
 Asn Glu Glu Asn Leu Glu Pro Tyr Leu Ile Leu  
 85 90

<210> 1691  
 <211> 483  
 <212> DNA  
 <213> Homo sapiens

<400> 1691  
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 ttgtgccttg aagtgtggga ccgcggcccc ggcattcctc aagacaaaca aaagtcattc  
 120  
 ttcgaagaat tcaaacgcct ggacagtcac cagaccgcg ccgagaaaagg cctgggcctg  
 180  
 ggccctggcga ttgccgacgg cttgtgccgc gtgctcgggc atcgcttgag cgtgcgttcg  
 240  
 tggccgggca agggcagcgt gttcagcgtg cgcgtgccgt tggcgcgac ccaggtcagc  
 300  
 gcgcctgccca agccggcgca ggaaagcggc cagccgttga gtggcgcgca ggtgctgtgt  
 360  
 gtgaataaca aagaaagcat cctgatcggc atgcgcagct tgctcccgcg ctggggctgc  
 420  
 gaagtctggc ccgcgcgcga ccaggcgcaa tgtgccgcgc tgttggtga ggggtgtgcg  
 480  
 ccg  
 483

<210> 1692  
 <211> 161  
 <212> PRT  
 <213> Homo sapiens

<400> 1692  
 Xaa Ala Phe Arg Tyr Ala Asp Gly Pro Val Leu Leu Gly Val Arg Arg  
 1 5 10 15  
 Arg Arg Gly Glu Leu Cys Leu Glu Val Trp Asp Arg Gly Pro Gly Ile  
 20 25 30  
 Pro Gln Asp Lys Gln Lys Ser Phe Phe Glu Glu Phe Lys Arg Leu Asp  
 35 40 45  
 Ser His Gln Thr Arg Ala Glu Lys Gly Leu Gly Leu Gly Leu Ala Ile  
 50 55 60  
 Ala Asp Gly Leu Cys Arg Val Leu Gly His Arg Leu Ser Val Arg Ser  
 65 70 75 80  
 Trp Pro Gly Lys Gly Ser Val Phe Ser Val Arg Val Pro Leu Ala Arg  
 85 90 95  
 Thr Gln Val Ser Ala Pro Ala Lys Pro Ala Gln Glu Ser Gly Gln Pro  
 100 105 110  
 Leu Ser Gly Ala Gln Val Leu Cys Val Asn Asn Lys Glu Ser Ile Leu  
 115 120 125  
 Ile Gly Met Arg Ser Leu Leu Pro Arg Trp Gly Cys Glu Val Trp Pro  
 130 135 140  
 Ala Arg Asp Gln Ala Gln Cys Ala Ala Leu Leu Ala Glu Gly Val Arg  
 145 150 155 160  
 Pro

<210> 1693  
 <211> 333  
 <212> DNA  
 <213> Homo sapiens

<400> 1693  
 acgcgtgttc catctgcagc cgtgcgaaaa ctctcccacc atgtcgcaga ctggatactt  
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 cgaggattca agctactaca agtgtgacac agatgacacc ttcgaagccc gagaggagat  
 120  
 actggggggg atgaggcctt cgacactgcc aactcctcca tcgtgtcttg cgagagtatc  
 180  
 cgtttttttg tcaatgtcaa ccttgagatg caggccacca aactgagaa tgaagcgact  
 240  
 tccggtggct gtgtgctcct gcacacctcc cgaaaggcca gcacgtcct gaacgagacg  
 300  
 gccacctccc tggataacgt gctgcggacc atg  
 333

<210> 1694  
 <211> 110  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 1694

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Met Val Arg Ser Thr Leu Ser Arg Glu Val Ala Val Ser Phe Arg Thr
 1           5           10           15
Met Leu Ala Phe Arg Glu Val Cys Arg Ser Thr Gln Pro Pro Glu Val
           20           25           30
Ala Ser Phe Ser Val Leu Val Ala Cys Ile Ser Arg Leu Thr Leu Thr
           35           40           45
Lys Lys Arg Ile Leu Ser Pro Asp Thr Met Glu Glu Leu Ala Val Ser
           50           55           60
Lys Ala Ser Ser Pro Pro Val Ser Pro Leu Gly Leu Arg Arg Cys His
65           70           75           80
Leu Cys His Thr Cys Ser Ser Leu Asn Pro Arg Ser Ile Gln Ser Ala
           85           90           95
Thr Trp Trp Glu Ser Phe Arg Thr Ala Ala Asp Gly Thr Arg
           100           105           110

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&lt;210&gt; 1695

&lt;211&gt; 485

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1695

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&lt;210&gt; 1696

&lt;211&gt; 148

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1696

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Arg Ala Tyr Asn Glu Asn Asp Val Ile Leu Met Arg Ser Lys Met Asn
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Val Leu Ser Glu Pro Ala Gly Gln Arg Arg Gln Pro Leu Arg Pro Leu
      35      40      45
Leu Lys Pro Cys Ala Ile Thr Ala Ala Ala Pro Val Val Pro Arg Arg
      50      55      60
Gln Leu Leu Ala Phe Pro Leu Gly Val Glu Phe Ala Gly Ser Pro Ile
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&lt;400&gt; 1701

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<213> Homo sapiens

<400> 1702

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| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Met | Gln | Phe | Glu | Pro | Ser | Thr | Met | Val | Tyr | Asp | Ala | Cys | Arg | Ile | Ile |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Arg | Glu | Arg | Ile | Pro | Glu | Ala | Pro | Ala | Gly | Pro | Pro | Ser | Asp | Phe | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Leu | Phe | Leu | Ser | Asp | Asp | Asp | Pro | Lys | Lys | Gly | Ile | Trp | Leu | Glu | Ala |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Gly | Lys | Ala | Leu | Asp | Tyr | Tyr | Met | Leu | Arg | Asn | Gly | Asp | Thr | Met | Glu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Tyr | Arg | Lys | Lys | Gln | Arg | Pro | Leu | Lys | Ile | Arg | Met | Leu | Asp | Gly | Thr |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Val | Lys | Thr | Ile | Met | Val | Asp | Asp | Ser | Lys | Thr | Val | Thr | Asp | Met | Leu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Met | Thr | Ile | Cys | Ala | Arg | Ile | Gly | Ile | Thr | Asn | His | Asp | Glu | Tyr | Ser |
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|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Leu | Lys | Lys | Asp | Lys | Thr | Leu | Leu | Arg | Asp | Glu | Lys | Lys | Met | Glu | Lys |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Leu | Lys | Gln | Lys | Leu | His | Thr | Asp | Asp | Glu | Leu | Asn | Trp | Leu | Asp | His |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Gly | Arg | Thr | Leu | Arg | Glu | Gln | Gly | Val | Glu | Glu | His | Glu | Thr | Leu | Leu |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Leu | Arg | Arg | Lys | Phe | Phe | Tyr | Ser | Asp | Gln | Asn | Val | Asp | Ser | Arg | Asp |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Pro | Val | Gln | Leu | Asn | Leu | Leu | Tyr | Val | Gln | Ala | Arg | Asp | Asp | Ile | Leu |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Asn | Gly | Ser | His | Pro | Val | Ser | Phe | Asp | Lys | Ala | Cys | Glu | Phe | Ala | Gly |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     | 240 |     |
| Phe | Gln | Cys | Gln | Ile | Gln | Phe | Gly | Pro | His | Asn | Glu | Gln | Lys | His | Lys |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Ala | Gly | Phe | Leu | Asp | Leu | Lys | Asp | Phe | Leu | Pro | Lys | Glu | Tyr | Val | Lys |
|     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |     |     |
| Gln | Lys | Gly | Glu | Arg | Lys | Ile | Phe | Gln | Ala | His | Lys | Asn | Cys | Gly | Gln |
|     | 275 |     |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |
| Met | Ser | Glu | Ile | Glu | Ala | Lys | Val | Arg | Tyr | Val | Lys | Leu | Ala | Arg | Ser |
|     | 290 |     |     |     |     |     | 295 |     |     |     |     | 300 |     |     |     |
| Leu | Lys | Thr | Tyr | Gly | Val | Ser | Phe | Phe | Leu | Val | Lys | Glu | Lys | Met | Lys |

1350

740 745 750  
 Ala Ser Gln Ala Ala Thr Glu Asp Gly Gln Leu Leu Arg Gly Val Gly  
 755 760 765  
 Ala Ala Ala Thr Ala Val Thr Gln Ala Leu Asn Glu Leu Leu Gln His  
 770 775 780  
 Val Lys Ala His Ala Thr Gly Ala Gly Pro Ala Gly Arg Tyr Asp Gln  
 785 790 795 800  
 Ala Thr Asp Thr Ile Leu Thr Val Thr Glu Asn Ile Phe Ser Ser Met  
 805 810 815  
 Gly Asp Ala Gly Glu Met Val Arg Gln Ala Arg Ile Leu Ala Gln Ala  
 820 825 830  
 Thr Ser Asp Leu Val Asn Ala Ile Lys Ala Asp Ala Glu Gly Glu Ser  
 835 840 845  
 Asp Leu Glu Asn Ser Arg Lys Leu Leu Ser Ala Ala Lys Ile Leu Ala  
 850 855 860  
 Asp Ala Thr Ala Lys Met Val Glu Ala Ala Lys Gly Ala Ala Ala His  
 865 870 875 880  
 Pro Asp Ser Glu Glu Gln Gln Gln Arg Leu Arg Glu Ala Ala Glu Gly  
 885 890 895  
 Leu Arg Met Ala Thr Asn Ala Ala Ala Gln Asn Ala Ile Lys Lys Lys  
 900 905 910  
 Leu Val Gln Arg Leu Glu His Ala Ala Lys Gln Ala Ala Ala Ser Ala  
 915 920 925  
 Thr Gln Thr Ile Ala Ala Ala Gln His Ala Ala Ser Ala Pro Lys Ala  
 930 935 940  
 Ser Ala Gly Pro Gln Pro Leu Leu Val Gln Ser Cys Lys Ala Val Ala  
 945 950 955 960  
 Glu Gln Ile Pro Leu Leu Val Gln Gly Val Arg Gly Ser Gln Ala Gln  
 965 970 975  
 Pro Asp Ser Pro Ser Ala Gln Leu Ala Leu Ile Ala Ala Ser Gln Ser  
 980 985 990  
 Phe Leu Gln Pro Gly Gly Lys Met Val Ala Ala Ala Lys Ala Ser Val  
 995 1000 1005  
 Pro Thr Ile Gln Asp Gln Ala Ser Ala Met Gln Leu Ser Gln Cys Ala  
 1010 1015 1020  
 Lys Asn Leu Gly Thr Ala Leu Ala Glu Leu Arg Thr Ala Ala Gln Lys  
 1025 1030 1035 1040  
 Ala Gln Glu Ala Cys Gly Pro Leu Glu Met Asp Ser Ala Leu Ser Val  
 1045 1050 1055  
 Val Gln Asn Leu Glu Lys Asp Leu Gln Glu Val Lys Ala Ala Ala Arg  
 1060 1065 1070  
 Asp Gly Lys Leu Lys Pro Leu Pro Gly Glu Thr Met Glu Lys Cys Thr  
 1075 1080 1085  
 Gln Asp Leu Gly Asn Ser Thr Lys Ala Val Ser Ser Ala Ile Ala Gln  
 1090 1095 1100  
 Leu Leu Gly Glu Val Ala Gln Gly Asn Glu Asn Tyr Ala Gly Ile Ala  
 1105 1110 1115 1120  
 Ala Arg Asp Val Ala Gly Gly Leu Arg Ser Leu Ala Gln Ala Ala Arg  
 1125 1130 1135  
 Gly Val Ala Ala Leu Thr Ser Asp Pro Ala Val Gln Ala Ile Val Leu  
 1140 1145 1150  
 Asp Thr Ala Ser Asp Val Leu Asp Lys Ala Ser Ser Leu Ile Glu Glu  
 1155 1160 1165  
 Ala Lys Lys Ala Ala Gly His Pro Gly Asp Pro Glu Ser Gln Gln Arg

1170 1175 1180  
 Leu Ala Gln Val Ala Lys Ala Val Thr Gln Ala Leu Asn Arg Cys Val  
 1185 1190 1195 1200  
 Ser Cys Leu Pro Gly Gln Arg Asp Val Asp Asn Ala Leu Arg Ala Val  
 1205 1210 1215  
 Gly Asp Ala Ser Lys Arg Leu Leu Ser Asp Ser Leu Pro Pro Ser Thr  
 1220 1225 1230  
 Gly Thr Phe Gln Glu Ala Gln Ser Arg Leu Asn Glu Ala Ala Gly  
 1235 1240 1245  
 Leu Asn Gln Ala Ala Thr Glu Leu Val Gln Ala Ser Arg Gly Thr Pro  
 1250 1255 1260  
 Gln Asp Leu Ala Arg Ala Ser Gly Arg Phe Gly Gln Asp Phe Ser Thr  
 1265 1270 1275 1280  
 Phe Leu Glu Ala Gly Val Glu Met Ala Gly Gln Ala Pro Ser Gln Glu  
 1285 1290 1295  
 Asp Arg Ala Gln Val Val Ser Asn Leu Lys Gly Ile Ser Met Ser Ser  
 1300 1305 1310  
 Ser Lys Leu Leu Ala Ala Lys Ala Leu Ser Thr Asp Pro Ala Ala  
 1315 1320 1325  
 Pro Asn Leu Lys Ser Gln Leu Ala Ala Ala Arg Ala Val Thr Asp  
 1330 1335 1340  
 Ser Ile Asn Gln Leu Ile Thr Met Cys Thr Gln Gln Ala Pro Gly Gln  
 1345 1350 1355 1360  
 Lys Glu Cys Asp Asn Ala Leu Arg Glu Leu Glu Thr Val Arg Glu Leu  
 1365 1370 1375  
 Leu Glu Asn Pro Val Gln Pro Ile Asn Asp Met Ser Tyr Phe Gly Cys  
 1380 1385 1390  
 Leu Asp Ser Val Met Glu Asn Ser Lys Val Leu Gly Glu Ala Met Thr  
 1395 1400 1405  
 Gly Ile Ser Gln Asn Ala Lys Asn Gly Asn Leu Pro Glu Phe Gly Asp  
 1410 1415 1420  
 Ala Ile Ser Thr Ala Ser Lys Ala Leu Cys Gly Phe Thr Glu Ala Ala  
 1425 1430 1435 1440  
 Ala Gln Ala Ala Tyr Leu Val Gly Val Ser Asp Pro Asn Ser Gln Ala  
 1445 1450 1455  
 Gly Gln Gln Gly Leu Val Glu Pro Thr Gln Phe Ala Arg Ala Asn Gln  
 1460 1465 1470  
 Ala Ile Gln Met Ala Cys Gln Ser Leu Gly Glu Pro Gly Cys Thr Gln  
 1475 1480 1485  
 Ala Gln Val Leu Ser Ala Ala Thr Ile Val Ala Lys His Thr Ser Ala  
 1490 1495 1500  
 Leu Cys Asn Ser Cys Arg Leu Ala Ser Ala Arg Thr Thr Asn Pro Thr  
 1505 1510 1515 1520  
 Ala Lys Arg Gln Phe Val Gln Ser Ala Lys Glu Val Ala Asn Ser Thr  
 1525 1530 1535  
 Ala Asn Leu Val Lys Thr Ile Lys Ala Leu Asp Gly Ala Phe Thr Glu  
 1540 1545 1550  
 Glu Asn Arg Ala Gln Cys Arg Ala Ala Thr Ala Pro Leu Leu Glu Ala  
 1555 1560 1565  
 Val Asp Asn Leu Ser Ala Phe Ala Ser Asn Pro Glu Phe Ser Ser Ile  
 1570 1575 1580  
 Pro Ala Gln Ile Ser Pro Glu Gly Arg Ala Ala Met Glu Pro Ile Val  
 1585 1590 1595 1600  
 Ile Ser Ala Lys Thr Met Leu Glu Ser Ala Gly Gly Leu Ile Gln Thr

|   |      |      |      |
|---|------|------|------|
|   | 1605 | 1610 | 1615 |
| Ala Arg Ala Leu Ala Val Asn Pro Arg Asp Pro Pro Ser Trp Ser Val |      |      |      |
|   | 1620 | 1625 | 1630 |
| Leu Ala Gly His Ser Arg Thr Val Ser Asp Ser Ile Lys Lys Leu Ile |      |      |      |
|   | 1635 | 1640 | 1645 |
| Thr Ser Met Arg Asp Lys Ala Pro Gly Gln Leu Glu Cys Glu Thr Ala |      |      |      |
|   | 1650 | 1655 | 1660 |
| Ile Ala Ala Leu Asn Ser Cys Leu Arg Asp Leu Asp Gln Ala Ser Leu |      |      |      |
|   | 1665 | 1670 | 1675 |
| Ala Ala Val Ser Gln Gln Leu Ala Pro Arg Glu Gly Ile Ser Gln Glu |      |      |      |
|   | 1685 | 1690 | 1695 |
| Ala Leu His Thr Gln Met Leu Thr Ala Val Gln Glu Ile Ser His Leu |      |      |      |
|   | 1700 | 1705 | 1710 |
| Ile Glu Pro Leu Ala Asn Ala Ala Arg Ala Glu Ala Ser Gln Leu Gly |      |      |      |
|   | 1715 | 1720 | 1725 |
| His Lys Val Ser Gln Met Ala Gln Tyr Phe Glu Pro Leu Thr Leu Ala |      |      |      |
|   | 1730 | 1735 | 1740 |
| Ala Val Gly Ala Ala Ser Lys Thr Leu Ser His Pro Gln Gln Met Ala |      |      |      |
|   | 1745 | 1750 | 1755 |
| Leu Leu Asp Gln Thr Lys Thr Leu Ala Glu Ser Ala Leu Gln Leu Leu |      |      |      |
|   | 1765 | 1770 | 1775 |
| Tyr Thr Ala Lys Glu Ala Gly Gly Asn Pro Lys Gln Ala Ala His Thr |      |      |      |
|   | 1780 | 1785 | 1790 |
| Gln Glu Ala Leu Glu Glu Ala Val Gln Met Met Thr Glu Ala Val Glu |      |      |      |
|   | 1795 | 1800 | 1805 |
| Asp Leu Thr Thr Thr Leu Asn Glu Ala Ala Ser Ala Ala Gly Val Val |      |      |      |
|   | 1810 | 1815 | 1820 |
| Gly Gly Met Val Asp Ser Ile Thr Gln Ala Ile Asn Gln Leu Asp Glu |      |      |      |
|   | 1825 | 1830 | 1835 |
| Gly Pro Met Gly Glu Pro Glu Gly Ser Phe Val Asp Tyr Gln Thr Thr |      |      |      |
|   | 1845 | 1850 | 1855 |
| Met Val Arg Thr Ala Lys Ala Ile Ala Val Thr Val Gln Glu Met Val |      |      |      |
|   | 1860 | 1865 | 1870 |
| Thr Lys Ser Asn Thr Ser Pro Glu Glu Leu Gly Pro Leu Ala Asn Gln |      |      |      |
|   | 1875 | 1880 | 1885 |
| Leu Thr Ser Asp Tyr Gly Arg Leu Ala Ser Glu Ala Lys Pro Ala Ala |      |      |      |
|   | 1890 | 1895 | 1900 |
| Val Ala Ala Glu Asn Glu Glu Ile Gly Ser His Ile Lys His Arg Val |      |      |      |
|   | 1905 | 1910 | 1915 |
| Gln Glu Leu Gly His Gly Cys Ala Ala Leu Val Thr Lys Ala Gly Ala |      |      |      |
|   | 1925 | 1930 | 1935 |
| Leu Gln Cys Ser Pro Ser Asp Ala Tyr Thr Lys Lys Glu Leu Ile Glu |      |      |      |
|   | 1940 | 1945 | 1950 |
| Cys Ala Arg Arg Val Ser Glu Lys Val Ser His Val Leu Ala Ala Leu |      |      |      |
|   | 1955 | 1960 | 1965 |
| Gln Ala Gly Asn Arg Gly Thr Gln Ala Cys Ile Thr Ala Ala Ser Ala |      |      |      |
|   | 1970 | 1975 | 1980 |
| Val Ser Gly Ile Ile Ala Asp Leu Asp Thr Thr Ile Met Phe Ala Thr |      |      |      |
|   | 1985 | 1990 | 1995 |
| Ala Gly Thr Leu Asn Arg Glu Gly Thr Glu Thr Ser Ala Asp His Arg |      |      |      |
|   | 2005 | 2010 | 2015 |
| Glu Gly Ile Leu Lys Thr Ala Lys Val Leu Val Glu Asp Thr Lys Val |      |      |      |
|   | 2020 | 2025 | 2030 |
| Leu Val Gln Asn Ala Ala Gly Ser Gln Glu Lys Leu Ala Gln Ala Ala |      |      |      |



|                         |                         |                     |
|-------------------------|-------------------------|---------------------|
| 2035                    | 2040                    | 2045                |
| Gln Ser Ser Val Ala Thr | Ile Thr Arg Leu Ala Asp | Val Val Lys Leu     |
| 2050                    | 2055                    | 2060                |
| Gly Ala Ala Ser Leu Gly | Ala Glu Asp Pro Glu Thr | Gln Val Val Leu     |
| 2065                    | 2070                    | 2075                |
| Ile Asn Ala Val Lys Asp | Val Ala Lys Ala Leu Gly | Asp Leu Ile Ser     |
| 2085                    | 2090                    | 2095                |
| Ala Thr Lys Ala Ala Ala | Gly Lys Val Gly Asp     | Asp Pro Ala Val Trp |
| 2100                    | 2105                    | 2110                |
| Gln Leu Lys Asn Ser Ala | Lys Val Met Val Thr Asn | Val Thr Ser Leu     |
| 2115                    | 2120                    | 2125                |
| Leu Lys Thr Val Lys Ala | Val Glu Asp Glu Ala Thr | Lys Gly Thr Arg     |
| 2130                    | 2135                    | 2140                |
| Ala Leu Glu Ala Thr Thr | Glu His Ile Arg Gln Glu | Leu Ala Val Phe     |
| 2145                    | 2150                    | 2155                |
| Cys Ser Pro Glu Pro Pro | Ala Lys Thr Ser Thr Pro | Glu Asp Phe Ile     |
| 2165                    | 2170                    | 2175                |
| Arg Met Thr Lys Gly Ile | Thr Met Ala Thr Ala Lys | Ala Val Ala Ala     |
| 2180                    | 2185                    | 2190                |
| Gly Asn Ser Cys Arg Gln | Glu Asp Val Ile Ala Thr | Ala Asn Leu Ser     |
| 2195                    | 2200                    | 2205                |
| Arg Arg Ala Ile Ala Asp | Met Leu Arg Ala Cys Lys | Glu Ala Ala Tyr     |
| 2210                    | 2215                    | 2220                |
| His Pro Glu Val Ala Pro | Asp Val Arg Leu Arg Ala | Leu His Tyr Gly     |
| 2225                    | 2230                    | 2235                |
| Arg Glu Cys Ala Asn Gly | Tyr Leu Glu Leu Leu Asp | His Val Leu Leu     |
| 2245                    | 2250                    | 2255                |
| Thr Leu Gln Lys Pro Ser | Pro Glu Leu Lys Gln Gln | Leu Thr Gly His     |
| 2260                    | 2265                    | 2270                |
| Ser Lys Arg Val Ala Gly | Ser Val Thr Glu Leu Ile | Gln Ala Ala Glu     |
| 2275                    | 2280                    | 2285                |
| Ala Met Lys Gly Thr Glu | Trp Val Asp Pro Glu Asp | Pro Thr Val Ile     |
| 2290                    | 2295                    | 2300                |
| Ala Glu Asn Glu Leu Leu | Gly Ala Ala Ala Ile Glu | Ala Ala Ala         |
| 2305                    | 2310                    | 2315                |
| Lys Lys Leu Glu Gln Leu | Lys Pro Arg Ala Lys Pro | Lys Glu Ala Asp     |
| 2325                    | 2330                    | 2335                |
| Glu Ser Leu Asn Phe Glu | Glu Gln Ile Leu Glu Ala | Ala Lys Ser Ile     |
| 2340                    | 2345                    | 2350                |
| Ala Ala Ala Thr Ser Ala | Leu Val Lys Ala Ala Ser | Ala Ala Gln Arg     |
| 2355                    | 2360                    | 2365                |
| Glu Leu Val Ala Gln Gly | Lys Val Gly Ala Ile Pro | Ala Asn Ala Leu     |
| 2370                    | 2375                    | 2380                |
| Asp Asp Gly Gln Trp Ser | Gln Gly Leu Ile Ser Ala | Ala Arg Met Val     |
| 2385                    | 2390                    | 2395                |
| Ala Ala Ala Thr Asn Asn | Leu Cys Glu Ala Ala Asn | Ala Ala Val Gln     |
| 2405                    | 2410                    | 2415                |
| Gly His Ala Ser Gln Glu | Lys Leu Ile Ser Ser Ala | Lys Gln Val Ala     |
| 2420                    | 2425                    | 2430                |
| Ala Ser Thr Ala Gln Leu | Leu Val Ala Cys Lys Val | Lys Ala Asp Gln     |
| 2435                    | 2440                    | 2445                |
| Asp Ser Glu Ala Met Lys | Arg Leu Gln Ala Ala Gly | Asn Ala Val Lys     |
| 2450                    | 2455                    | 2460                |
| Arg Ala Ser Asp Asn Leu | Val Lys Ala Ala Gln Lys | Ala Ala Ala Phe     |

|   |      |      |      |
|---|------|------|------|
| 2465  | 2470 | 2475 | 2480 |
| Glu Glu Gln Glu Asn Glu Thr Val Val Val Lys Glu Lys Met Val Gly |      |      |      |
|   | 2485 | 2490 | 2495 |
| Gly Ile Ala Gln Ile Ile Ala Ala Gln Glu Glu Met Leu Arg Lys Glu |      |      |      |
|   | 2500 | 2505 | 2510 |
| Arg Glu Leu Glu Glu Ala Arg Lys Lys Leu Ala Gln Ile Arg Gln Gln |      |      |      |
|   | 2515 | 2520 | 2525 |
| Gln Tyr Lys Phe Leu Pro Ser Glu Leu Arg Asp Glu His             |      |      |      |
|   | 2530 | 2535 | 2540 |

<210> 1703  
 <211> 346  
 <212> DNA  
 <213> Homo sapiens

<400> 1703  
 ggatcccgag gagaaaaatc ctctgttact tcatgggtca tgtgactgag aatcttttta  
 60  
 ggaatctgtg atggagaaga atgactcttc ttcttctctg agtcctgtag taatgcattc  
 120  
 tctgctctac ccttctccat gactgctgcc tggctctgtcc tagccttgct ctgatccaca  
 180  
 ctgagctggc cttgagcagg gtcgcacctg tacatgaaga caatggctgg tttctcactg  
 240  
 gactctcctt tcgcctctgt gaaccagtga tggcgctgaa ctggaggaag aggcagcatg  
 300  
 tgaatgactg tgccatccat ggccaccaag ttccctttct ctgct  
 346

<210> 1704  
 <211> 106  
 <212> PRT  
 <213> Homo sapiens

<400> 1704  
 Met Asp Gly Thr Val Ile His Met Leu Pro Leu Pro Pro Val Gln Arg  
 1 5 10 15  
 His His Trp Phe Thr Glu Ala Lys Gly Glu Ser Ser Glu Lys Pro Ala  
 20 25 30  
 Ile Val Phe Met Tyr Arg Cys Asp Pro Ala Gln Gly Gln Leu Ser Val  
 35 40 45  
 Asp Gln Ser Lys Ala Arg Thr Asp Gln Ala Ala Val Met Glu Lys Gly  
 50 55 60  
 Arg Ala Glu Asn Ala Leu Leu Gln Asp Ser Glu Lys Lys Arg Ser His  
 65 70 75 80  
 Ser Ser Pro Ser Gln Ile Pro Lys Lys Ile Leu Ser His Met Thr His  
 85 90 95  
 Glu Val Thr Glu Asp Phe Ser Pro Arg Asp  
 100 105

<210> 1705  
 <211> 377  
 <212> DNA  
 <213> Homo sapiens

&lt;400&gt; 1705

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 60  
 aaccatcaaa tccattotca atgggtcaaa ttccaaattt tctgaaggg ctggcttcta  
 120  
 ctggtgctcc aatcgagttg cagaaaggta tacaggggtg agcaagttta tttaatcctg  
 180  
 gttttggctg gaacaaaaat ccacaagttc aaaccttgaa gaattctcaa ggttctattc  
 240  
 ataatttagt gaggtctgga gttactgttg aaaggaaagt taatgtaggg gcacaaggag  
 300  
 cttttaactc tgcccctgca ccacagatgg aatttcccac agttcctcca tacaaccct  
 360  
 cttccttcgg agctagc  
 377

&lt;210&gt; 1706

&lt;211&gt; 110

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1706

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Asp | Lys | Thr | Lys | Pro | Ser | Asn | Pro | Phe | Ser | Met | Gly | Gln | Ile | Pro |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Asn | Phe | Pro | Glu | Gly | Leu | Ala | Ser | Thr | Gly | Ala | Pro | Ile | Glu | Leu | Gln |
|     |     | 20  |     |     |     |     | 25  |     |     |     | 30  |     |     |     |     |
| Lys | Gly | Ile | Gln | Gly | Gly | Ala | Ser | Leu | Phe | Asn | Pro | Gly | Phe | Gly | Trp |
|     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |     |
| Asn | Gln | Asn | Pro | Gln | Val | Gln | Thr | Leu | Lys | Asn | Ser | Gln | Gly | Ser | Ile |
|     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |
| His | Asn | Leu | Val | Arg | Ser | Gly | Val | Thr | Val | Glu | Arg | Lys | Val | Asn | Val |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |     |
| Gly | Ala | Gln | Gly | Ala | Phe | Asn | Ser | Ala | Pro | Ala | Pro | Gln | Met | Glu | Phe |
|     |     | 85  |     |     |     |     |     | 90  |     |     |     | 95  |     |     |     |
| Pro | Thr | Val | Pro | Pro | Tyr | Asn | Pro | Ser | Ser | Phe | Gly | Ala | Ser |     |     |
|     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |     |

&lt;210&gt; 1707

&lt;211&gt; 427

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1707

nnttcggtga acccgaagcc cggacgcagc gccgataccc atgtgcgccc agtactacgc  
 60  
 catcacgcca agcgagtgtc catcatcggg gccgggctag ccggcatgga ggctgcgcga  
 120  
 gttctcagcg aacgcgcaca cgaacctctc atcgtcgagg ccagcgacca cattggcgga  
 180  
 gtcctccttg cgggtgggtca accttccttc aaggaggacg acctagctct gctggagtgg  
 240  
 taccgcacca ccctggagga gttgggcgtg gagattcgac tcaacaccac cgtaacggct  
 300

gatcttatcg cttccttcgg ggccgatcac gtcgtcctgg cgaccggatc gaggccgcgt  
 360  
 cgactcgacc taggtgatga tgccaaggtc attgacgcca ccgacgctct gctcaaccgc  
 420  
 gacgcgt  
 427

<210> 1708  
 <211> 142  
 <212> PRT  
 <213> Homo sapiens

<400> 1708  
 Xaa Ser Val Asn Pro Lys Pro Gly Arg Ser Ala Asp Thr His Val Arg  
 1 5 10 15  
 Pro Val Leu Arg His His Ala Lys Arg Val Leu Ile Ile Gly Ala Gly  
 20 25 30  
 Leu Ala Gly Met Glu Ala Ala Arg Val Leu Ser Glu Arg Ala His Glu  
 35 40 45  
 Pro Leu Ile Val Glu Ala Ser Asp His Ile Gly Gly Val Ile Leu Ala  
 50 55 60  
 Gly Gly Gln Pro Ser Phe Lys Glu Asp Asp Leu Ala Leu Leu Glu Trp  
 65 70 75 80  
 Tyr Arg Thr Thr Leu Glu Glu Leu Gly Val Glu Ile Arg Leu Asn Thr  
 85 90 95  
 Thr Val Thr Ala Asp Leu Ile Ala Ser Phe Gly Ala Asp His Val Val  
 100 105 110  
 Leu Ala Thr Gly Ser Arg Pro Arg Leu Asp Leu Gly Asp Asp Ala  
 115 120 125  
 Lys Val Ile Asp Ala Thr Asp Ala Leu Leu Asn Arg Asp Ala  
 130 135 140

<210> 1709  
 <211> 446  
 <212> DNA  
 <213> Homo sapiens

<400> 1709  
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 60  
 ctgttctttt ctgactgatg actgggagtc agggaagatg aatgcagagt ctgtgatcac  
 120  
 ctctctttcc agccacatca tatctcagcc tcctggagga aactcccata gcttgtctct  
 180  
 tcagtcccag ttgacagctt ctgaacgttt ccaagagaat agttcggatc attcagaaac  
 240  
 caggttggtg caagaggtct tctttcaggc aatcctgctt gctgtgtgct taatcatttc  
 300  
 tgcattgtgca agatgggtta tgggagaaat attagccagt gtcttcacat gtcattgat  
 360  
 gataactgta gcttatgtga aatcattgtt tctcagcctt gccagctatt tcaaaaccac  
 420  
 tgctgtgct cggtttgtca aaattt  
 446

<210> 1710  
 <211> 116  
 <212> PRT  
 <213> Homo sapiens

<400> 1710  
 Met Asn Ala Glu Ser Val Ile Thr Ser Ser Ser Ser His Ile Ile Ser  
 1 5 10 15  
 Gln Pro Pro Gly Gly Asn Ser His Ser Leu Ser Leu Gln Ser Gln Leu  
 20 25 30  
 Thr Ala Ser Glu Arg Phe Gln Glu Asn Ser Ser Asp His Ser Glu Thr  
 35 40 45  
 Arg Leu Leu Gln Glu Val Phe Phe Gln Ala Ile Leu Leu Ala Val Cys  
 50 55 60  
 Leu Ile Ile Ser Ala Cys Ala Arg Trp Val Met Gly Glu Ile Leu Ala  
 65 70 75 80  
 Ser Val Phe Thr Cys Ser Leu Met Ile Thr Val Ala Tyr Val Lys Ser  
 85 90 95  
 Leu Phe Leu Ser Leu Ala Ser Tyr Phe Lys Thr Thr Ala Cys Ala Arg  
 100 105 110  
 Phe Val Lys Ile  
 115

<210> 1711  
 <211> 426  
 <212> DNA  
 <213> Homo sapiens

<400> 1711  
 nggggggattc atgtagtat ttgtcagaaa aggcttttga aagagccaaa ttaaaaagag  
 60  
 cactagaaca tgaacaggga aagcagagga aatacttgta gaaagtattt ttacagctc  
 120  
 cctcaatata attcagtaat gttcattcct ggtgagaagt ctgtccgcac acacagcatc  
 180  
 agccaagcag cagaagcagt ggtgtctggg gggctgggaa gtttttcccc caaataccca  
 240  
 ccccatgcac tgcccagtc ccagacccca aagactttgt cctcgctca cgcacctttt  
 300  
 gcaggctcac actgtctgtg tgcgcaagag gtagcgacag gagacaatgg ggaaagagct  
 360  
 gaaggaggca aacaaggcca gggggaaagc ctacctcgag gcacagaggg gccccaagat  
 420  
 ggatat  
 426

<210> 1712  
 <211> 119  
 <212> PRT  
 <213> Homo sapiens

<400> 1712  
 Met Asn Arg Glu Ser Arg Gly Asn Thr Cys Arg Lys Tyr Phe Leu Gln

```

      1           5           10           15
Leu Pro Gln Tyr Asn Ser Val Met Phe Ile Pro Gly Glu Lys Ser Val
      20           25           30
Arg Thr His Ser Ile Ser Gln Ala Glu Ala Val Val Ser Gly Gly
      35           40           45
Leu Gly Ser Phe Ser Pro Lys Tyr Pro Pro His Ala Leu Pro Ser Pro
      50           55           60
Gln Thr Pro Lys Thr Leu Ser Ser Pro His Ala Pro Phe Ala Gly Ser
      65           70           75           80
His Cys Leu Cys Ala Gln Glu Val Ala Thr Gly Asp Asn Gly Glu Arg
      85           90           95
Ala Glu Gly Gly Lys Gln Gly Gln Gly Glu Ser Leu Pro Arg Gly Thr
      100           105           110
Glu Gly Pro Gln Asp Gly Tyr
      115

```

<210> 1713  
 <211> 328  
 <212> DNA  
 <213> Homo sapiens

```

<400> 1713
tctagaaagg tttatttcat gggccaaggc ttgtgtttcc aaagccagga agggctgaag
60
ccagaattgg ccctggctgc ttgccacaga gtctggccgg gggaccctgg acctcagcag
120
ggcatgatg aggtcagctt tggaggagca gggccagcgt gtctgtcttt ctgctcctgg
180
aatgagcctc actccctccc tgetcaaggc agcccttcac ccagccgccg ggacaggtgc
240
cctgtgccac ctgccatccc tgggattctc catctcagtg agtgctccct ggggcctggg
300
aacgcatctg gctgggtgact cctggggg
328

```

<210> 1714  
 <211> 99  
 <212> PRT  
 <213> Homo sapiens

```

<400> 1714
Met Gly Gln Gly Leu Cys Phe Gln Ser Gln Glu Gly Leu Lys Pro Glu
      1           5           10           15
Leu Ala Leu Ala Ala Cys His Arg Val Trp Pro Gly Asp Pro Gly Pro
      20           25           30
Gln Gln Gly His Asp Glu Val Ser Phe Gly Gly Ala Gly Pro Ala Cys
      35           40           45
Pro Ala Phe Cys Ser Trp Asn Glu Pro His Ser Leu Pro Ala Gln Gly
      50           55           60
Ser Pro Ser Pro Ser Arg Arg Asp Arg Cys Pro Val Pro Pro Ala Ile
      65           70           75           80
Pro Gly Ile Leu His Leu Ser Glu Cys Ser Leu Gly Pro Gly Asn Ala
      85           90           95
Ser Gly Trp

```

<210> 1715  
 <211> 489  
 <212> DNA  
 <213> Homo sapiens

<400> 1715  
 gttgccagcg atgggccgca tttgtacatc ccggtatttc gtgttcggtg tggtgtaaaa  
 60  
 gatgccccat gtgtgacatt ctgtggatag ttattgtag cattatttga caagttctag  
 120  
 aaatcgatcc acccaggcgt gtagctgcgg tatttcatca gagttgatcg ttgcgatgag  
 180  
 ttgatcatgg cctgtcatgg cgtagtcttc tacgtcgtaa agtatgagac aatccacggc  
 240  
 aatatgggtgt tttttggcca actcgggaagc cggggtgtcg gggaagtcgg tccctgtaag  
 300  
 gtatgggcct gtcccaatga cgacgtgtgc tgggtccatg aggagttcgt ccaaggttcg  
 360  
 aactcattac cgtcgaatac gacgctgtcg ccacggcgg tgcgaatcg aatcctcaaa  
 420  
 gtgtatccgt actcgggtgc gcgcaacagg tgcctaacct cagcgctagt gggctgtgca  
 480  
 ctgacgcgt  
 489

<210> 1716  
 <211> 101  
 <212> PRT  
 <213> Homo sapiens

<400> 1716  
 Met Ala Cys His Gly Val Val Phe Tyr Val Val Lys Tyr Glu Thr Ile  
 1 5 10 15  
 His Gly Asn Met Val Phe Phe Gly Gln Leu Gly Ser Arg Gly Val Gly  
 20 25 30  
 Glu Val Gly Pro Cys Lys Val Trp Ala Cys Pro Asn Asp Asp Val Cys  
 35 40 45  
 Trp Val His Glu Glu Phe Val Gln Gly Ser Asn Ser Leu Pro Ser Asn  
 50 55 60  
 Thr Thr Leu Ser Pro Ser Ala Val Ser Asn Arg Ile Leu Lys Val Tyr  
 65 70 75 80  
 Pro Tyr Ser Val Ser Arg Asn Arg Cys Leu Thr Ser Ala Leu Val Gly  
 85 90 95  
 Cys Ala Leu Thr Arg  
 100

<210> 1717  
 <211> 312  
 <212> DNA  
 <213> Homo sapiens

<400> 1717

nggcatacaa cggagtaaaa accacatcaa cagaagtgga aacaggccca gagagcgtga  
 60  
 gaggtttctg gtttcaagaa ggcacactga gtccctgcac ccgatgcctc tccttcccca  
 120  
 aatcccactg gaatacacag agagacataa aaacaaggag tgtcctgtag cagagcagcc  
 180  
 aggctggctc atgagacaga gggagcagtc ttctgggaga catggctctt gctgctgcgg  
 240  
 atcagccaac agatccatgg aaagcaaagg gcccttctcc ggaggcttcc tggggcctgc  
 300  
 catgaatgtg tc  
 312

<210> 1718  
 <211> 101  
 <212> PRT  
 <213> Homo sapiens

<400> 1718  
 Met Ala Gly Pro Arg Lys Pro Pro Glu Lys Gly Pro Leu Leu Ser Met  
 1 5 10 15  
 Asp Leu Leu Ala Asp Pro Gln Gln Gln Glu Pro Cys Leu Pro Glu Asp  
 20 25 30  
 Cys Ser Leu Cys Leu Met Ser Gln Pro Gly Cys Ser Ala Thr Gly His  
 35 40 45  
 Ser Leu Phe Leu Cys Leu Ser Val Tyr Ser Ser Gly Ile Trp Gly Arg  
 50 55 60  
 Arg Gly Ile Gly Cys Arg Asp Ser Val Cys Leu Leu Glu Thr Arg Asn  
 65 70 75 80  
 Leu Ser Arg Ser Leu Gly Leu Phe Pro Leu Leu Leu Met Trp Phe Leu  
 85 90 95  
 Leu Arg Cys Met Pro  
 100

<210> 1719  
 <211> 404  
 <212> DNA  
 <213> Homo sapiens

<400> 1719  
 tgatcaccac ggccctgccca ttttttgtcg ggaccgcaga ccgatgctg cccctcgaag  
 60  
 tcagagacaa tccaaccggc ctgcaaaact gcggtcttgc ccggggcaac gtcgtagggt  
 120  
 ccaacagttt ctccaacctc ataggtagaa gaagtgtat agctgctgga aatggagatg  
 180  
 tggatcatat cgagcagtgg gaagtcaatg cctgccgaaa ccgaccagtt ctctgtctta  
 240  
 gtttctgtga tggatcgctg gaccggctgc ggagtgtcgt tgagttggaa atcgtcacgt  
 300  
 cccagcagag ccatcgaagt agctgcgcac cacatgaacg ggctgtccgt gtcacccgga  
 360  
 ttcgagcagg gagcaccat tggtnngtgg tgtccccggg gggt  
 404



<210> 1720  
 <211> 126  
 <212> PRT  
 <213> Homo sapiens

<400> 1720  
 Met Gly Ala Pro Cys Ser Asn Pro Gly Asp Thr Asp Ser Pro Phe Met  
 1 5 10 15  
 Trp Cys Ala Ala Thr Ser Met Ala Leu Gly Arg Asp Asp Phe Gln  
 20 25 30  
 Leu Asn Asp Thr Pro Gln Pro Val Thr Arg Ser Ile Thr Glu Thr Lys  
 35 40 45  
 Thr Lys Asn Trp Ser Val Ser Ala Gly Ile Asp Phe Pro Leu Leu Asp  
 50 55 60  
 Val Ile His Ile Ser Ile Ser Ser Ser Tyr Ser Thr Ser Ser Thr Tyr  
 65 70 75 80  
 Glu Val Gly Glu Thr Val Gly Pro Tyr Asp Val Ala Pro Gly Lys Thr  
 85 90 95  
 Ala Val Leu Gln Ala Gly Trp Ile Val Ser Asp Phe Glu Gly Gln His  
 100 105 110  
 Thr Val Cys Gly Pro Asp Lys Lys Trp Gln Gly Arg Gly Asp  
 115 120 125

<210> 1721  
 <211> 529  
 <212> DNA  
 <213> Homo sapiens

<400> 1721  
 ccattggccac cctttcagga cagagctgcc cttcccatgc tggaggagcc acagggcctg  
 60  
 gtcgctgtgg cttcagcctc ccagctcctc ctgtcctctg ctgggcactt gtaatgtcca  
 120  
 ggcaactcct gcttggatca ggggatctgg gtttcattctt cccagctcct cctgtcctct  
 180  
 gctgggcacc tgtgatgtcc aggcactccc tgcttggatt ggggatctg ggtttcatct  
 240  
 tcccagctcc tcctgtcctc cgctgggcac ctgtgatgtc caggcactcc ctgcttggat  
 300  
 cgggggggtct gggttttgtg ctatacttgg tgctcccttt cactcaggcc ccttcttgac  
 360  
 tctgcagagc taccctcgc catctctttc acgcgggcct cctgcagtct ctgtgctcac  
 420  
 cctgtgactc tgcttccggt gttgtcaaat gggggtcac ccaggacccg caccactggg  
 480  
 tcgtgtgcag gtttctgggg tggcagagtg cggatgagtg ggcacgcgt  
 529

<210> 1722  
 <211> 118  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 1722

```

Met Ala Thr Leu Ser Gly Gln Ser Cys Pro Ser His Ala Gly Gly Ala
 1           5           10           15
Thr Gly Pro Gly Arg Cys Gly Phe Ser Leu Pro Ala Pro Pro Val Leu
      20           25           30
Cys Trp Ala Leu Val Met Ser Arg His Ser Leu Leu Gly Ser Gly Asp
      35           40           45
Leu Gly Phe Ile Phe Pro Ala Pro Pro Val Leu Cys Trp Ala Pro Val
      50           55           60
Met Ser Arg His Ser Leu Leu Gly Leu Gly Asp Leu Gly Phe Ile Phe
65           70           75           80
Pro Ala Pro Pro Val Leu Arg Trp Ala Pro Val Met Ser Arg His Ser
      85           90           95
Leu Leu Gly Ser Gly Gly Leu Gly Phe Val Leu Tyr Leu Val Leu Pro
      100          105          110
Phe Thr Gln Ala Pro Ser
      115

```

&lt;210&gt; 1723

&lt;211&gt; 371

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1723

```

acgcgtttga agctggatgc atggatatcc agcgccgccca tcgggtcaaa tgggttgacg
60
ctgcccttga tggtcaccgg ggcgtagcga tctaccttac cgttgatgtc gacgctcgcc
120
ggtttggcct ggcggctgtc aatggtgcca atcttcccg tgaattgttg aatggcagtg
180
gcaaagttag gcgtgaggct gaagtcggcg aagttggccg agccatcatt gatcgcaacc
240
tgcccaatgt gaatgccag tggcttctct ttgctggccg ccggtgtct tgttgccagt
300
gtcggccggg tgcgggatca gcaagtcac gatgttggtg gggcggtcac cggtgatcgc
360
tgcatccaat a
371

```

&lt;210&gt; 1724

&lt;211&gt; 111

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1724

```

Met Asp Ile Gln Arg Arg His Arg Val Lys Trp Val Asp Ala Ala Leu
 1           5           10           15
Asp Gly His Arg Gly Val Ala Ile Tyr Leu Thr Val Asp Val Asp Ala
      20           25           30
Arg Arg Phe Gly Leu Ala Ala Val Asn Gly Ala Asn Leu Pro Val Glu
      35           40           45
Leu Leu Asn Gly Ser Gly Lys Val Gly Arg Glu Ala Glu Val Gly Glu
      50           55           60
Val Gly Arg Ala Ile Ile Asp Arg Asn Leu Pro Asn Val Asn Ala Gln

```

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65  |     | 70  |     | 75  |     | 80  |     |     |     |     |     |     |     |     |     |
| Trp | Leu | Leu | Phe | Ala | Gly | Arg | Arg | Leu | Ser | Cys | Cys | Gln | Cys | Arg | Pro |
|     |     | 85  |     | 90  |     | 95  |     |     |     |     |     |     |     |     |     |
| Gly | Ala | Gly | Ser | Ala | Ser | His | Arg | Cys | Trp | Trp | Gly | Gly | His | Arg |     |
|     |     | 100 |     | 105 |     | 110 |     |     |     |     |     |     |     |     |     |

<210> 1725  
 <211> 807  
 <212> DNA  
 <213> Homo sapiens

<400> 1725  
 ngtgcacctg gtatggtgcc ctctgggtct aagcctgtcc ttgtacacac tcacactttg  
 60  
 atttgaagtg acctcttccc tctgagcctt ctggtgtcca actctcccct tctctaggac  
 120  
 catgcagtgc tggaggccga gaggcagaag atgtcagccc ttgtgagagg gctgcagagg  
 180  
 gagctggagg agacttcaga ggagacaggg cattggcaga gtatgttcca gaagaacaag  
 240  
 gaggatctta gagccaccaa gcaggaactc ctgcagctgc gaatggagaa ggaggagatg  
 300  
 gaagaggagc ttggagagaa gatagaggtc ttgcagaggg aattagagca ggcccagact  
 360  
 agtgtctggag atactcgcca ggttgaggtg ctcaagaagg agctgctccg gacacaggag  
 420  
 gagcttaagg aactgcaggc agaacggcag agccaggagg tggctgggag acaccgggac  
 480  
 cgggagttag agaagcagct ggcggtcctg agggtcgagg ctgatcgagg tcgggagctg  
 540  
 gaagaacaga acctccagct acaaaagacc ctccagcaat tgcgacagga ctgtgaagag  
 600  
 gcttccaagg ctaagatggt ggccgaggca gaggcaacag tgctggggca gcggcggggc  
 660  
 gcagtggaga cgacgcttcg ggagaccag gaggaatg acgaattccg ccggcgcatc  
 720  
 ctgggttttg agcagcagct gaaggagact cgaggtcttg tggatggttg ggaagcgggt  
 780  
 gaggcacgac tacgggacaa gctgcag  
 807

<210> 1726  
 <211> 230  
 <212> PRT  
 <213> Homo sapiens

<400> 1726  
 Asp His Ala Val Leu Glu Ala Glu Arg Gln Lys Met Ser Ala Leu Val  
 1 5 10 15  
 Arg Gly Leu Gln Arg Glu Leu Glu Glu Thr Ser Glu Glu Thr Gly His  
 20 25 30  
 Trp Gln Ser Met Phe Gln Lys Asn Lys Glu Asp Leu Arg Ala Thr Lys  
 35 40 45  
 Gln Glu Leu Leu Gln Leu Arg Met Glu Lys Glu Glu Met Glu Glu Glu

|   |     |     |     |     |
|---|-----|-----|-----|-----|
| 50  |     | 55  |     | 60  |
| Leu Gly Glu Lys Ile Glu Val Leu Gln Arg Glu Leu Glu Gln Ala Arg |     |     |     |     |
| 65  |     | 70  |     | 75  |
| Ala Ser Ala Gly Asp Thr Arg Gln Val Glu Val Leu Lys Lys Glu Leu |     |     |     | 80  |
|   | 85  |     | 90  | 95  |
| Leu Arg Thr Gln Glu Glu Leu Lys Glu Leu Gln Ala Glu Arg Gln Ser |     |     |     |     |
|   | 100 |     | 105 | 110 |
| Gln Glu Val Ala Gly Arg His Arg Asp Arg Glu Leu Glu Lys Gln Leu |     |     |     |     |
|   | 115 |     | 120 | 125 |
| Ala Val Leu Arg Val Glu Ala Asp Arg Gly Arg Glu Leu Glu Glu Gln |     |     |     |     |
|   | 130 |     | 135 | 140 |
| Asn Leu Gln Leu Gln Lys Thr Leu Gln Gln Leu Arg Gln Asp Cys Glu |     |     |     |     |
| 145   |     | 150 |     | 155 |
| Glu Ala Ser Lys Ala Lys Met Val Ala Glu Ala Glu Ala Thr Val Leu |     |     |     | 160 |
|   | 165 |     | 170 | 175 |
| Gly Gln Arg Arg Ala Ala Val Glu Thr Thr Leu Arg Glu Thr Gln Glu |     |     |     |     |
|   | 180 |     | 185 | 190 |
| Glu Asn Asp Glu Phe Arg Arg Arg Ile Leu Gly Leu Glu Gln Gln Leu |     |     |     |     |
|   | 195 |     | 200 | 205 |
| Lys Glu Thr Arg Gly Leu Val Asp Gly Gly Glu Ala Val Glu Ala Arg |     |     |     |     |
|   | 210 |     | 215 | 220 |
| Leu Arg Asp Lys Leu Gln   |     |     |     |     |
| 225   |     | 230 |     |     |

&lt;210&gt; 1727

&lt;211&gt; 474

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1727

```

aaccaactct ccacaacatc gccagaaaca gtcgctgcc aagggtcca ccatgtttta
60
gcagcttcag aagacaaaga taagatgaaa aaggaagttt tacaaagctc aaggacatt
120
atgcaatcca aatcagcttg cgaaattaaa caaagtcacc aagaatgtag tacccaacaa
180
acacaacaga agaagtattt ggagcagttg cacttgcccc aaagcaaacc aatttcccc
240
aatttcaaag ttaaaaccat caaacttcca actctagatc atacattaaa tgaaacagac
300
cacagctatg aaagtcataa acagcaatct gagattgatg ttcaaacctt taccaaaaaa
360
caatatctga aaaccaagaa aactgaagca agcactgaat gtagtcataa gcaatctctg
420
gctgaaagac attatcagtt acctaagaag gagaaaagag tgacagtaca attg
474

```

&lt;210&gt; 1728

&lt;211&gt; 130

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1728

Met Lys Lys Glu Val Leu Gln Ser Ser Arg Asp Ile Met Gln Ser Lys

```

      1           5           10           15
Ser Ala Cys Glu Ile Lys Gln Ser His Gln Glu Cys Ser Thr Gln Gln
      20           25           30
Thr Gln Gln Lys Lys Tyr Leu Glu Gln Leu His Leu Pro Gln Ser Lys
      35           40           45
Pro Ile Ser Pro Asn Phe Lys Val Lys Thr Ile Lys Leu Pro Thr Leu
      50           55           60
Asp His Thr Leu Asn Glu Thr Asp His Ser Tyr Glu Ser His Lys Gln
      65           70           75           80
Gln Ser Glu Ile Asp Val Gln Thr Phe Thr Lys Lys Gln Tyr Leu Lys
      85           90           95
Thr Lys Lys Thr Glu Ala Ser Thr Glu Cys Ser His Lys Gln Ser Leu
      100          105          110
Ala Glu Arg His Tyr Gln Leu Pro Lys Lys Glu Lys Arg Val Thr Val
      115          120          125
Gln Leu
      130

```

<210> 1729  
 <211> 470  
 <212> DNA  
 <213> Homo sapiens

```

<400> 1729
acgcgtgact cgccataaca ttgctgacac gttttccacg gcaagggagg catcatgacg
60
aggatcgacg tgtggctgtg gtcggtgcgc gtctataagt cccggtcgtt ggctaccgcc
120
gccgtcaagg gcggccacat tcgcctcaat ggagaccggt ttaaaccctc ccacgacgtg
180
aaacccggcg ataccgtcac catccacacc cccggatggg accgggtcct caaggtcac
240
aaccgatca cgaaaagagt cggcgccaaa ctgcggtcg aggcttacga agatctgtca
300
nngcccccg accgcctac ctctctgnet ccctcgccc gccgcgaccg tggggctgga
360
cgaccacca agaaggatcg tcgcgagatc gatcggtcc gaggcggga ctctcgctat
420
tgaggactct tcgcccggcc caacacacca cggctcgcg ccgaattggc
470

```

<210> 1730  
 <211> 131  
 <212> PRT  
 <213> Homo sapiens

```

<400> 1730
His Val Phe His Gly Lys Gly Gly Ile Met Thr Arg Ile Asp Val Trp
      1           5           10           15
Leu Trp Ser Val Arg Val Tyr Lys Ser Arg Ser Leu Ala Thr Ala Ala
      20           25           30
Val Lys Gly Gly His Ile Arg Leu Asn Gly Asp Pro Val Lys Pro Ser
      35           40           45
His Asp Val Lys Pro Gly Asp Thr Val Thr Ile His Thr Pro Gly Trp

```

```

      50              55              60
Asp Arg Val Leu Lys Val Ile Asn Pro Ile Thr Lys Arg Val Gly Ala
65              70              75              80
Lys Leu Ala Val Glu Ala Tyr Glu Asp Leu Ser Xaa Pro Pro Asp Pro
      85              90              95
Pro Thr Ser Leu Xaa Pro Leu Ala Arg Arg Asp Arg Gly Ala Gly Arg
      100             105             110
Pro Thr Lys Lys Asp Arg Arg Glu Ile Asp Arg Leu Arg Gly Arg Asp
      115             120             125
Ser Arg Tyr
      130

```

&lt;210&gt; 1731

&lt;211&gt; 534

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1731

```

agcgcctccct gcctgctgct gggcggaggg aaggcggcaa gagctgcgga gcccctggaa
60
gagcttccag gaaccctgcg ctgtgggata aaggaatgag gttcagaaag gggcagggag
120
ttgcccgcag ccgcaccgca cgtcttcagc ccgaccgttg tctgacctc tctgtcccgt
180
cccctgccca gtctcaccat ggccttcttg acacagctga tgctgctgct ctggaagaat
240
ttcatgtatc gccggagaca gccggtccag ctccctggtcg aattgctgtg gcctctcttc
300
ctcttcttca tcttggtggc tgttcgccac tcccaccgc ccctggagca ccatgaatgc
360
cacttcccaa acaagccact gccatcggcg ggcaccgtgc cctggctcca gggctctcatc
420
tgtaatgtga acaacacctg ctttccgcag ctgacaccgg gcgaggagcc cgggcgcctg
480
agcaacttca acgactccct ggtctcccg cgtctacgtc ggagagaggc tgga
534

```

&lt;210&gt; 1732

&lt;211&gt; 112

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1732

```

Met Ala Phe Trp Thr Gln Leu Met Leu Leu Trp Lys Asn Phe Met
1              5              10              15
Tyr Arg Arg Arg Gln Pro Val Gln Leu Val Glu Leu Leu Trp Pro
      20              25              30
Leu Phe Leu Phe Phe Ile Leu Val Ala Val Arg His Ser His Pro Pro
      35              40              45
Leu Glu His His Glu Cys His Phe Pro Asn Lys Pro Leu Pro Ser Ala
      50              55              60
Gly Thr Val Pro Trp Leu Gln Gly Leu Ile Cys Asn Val Asn Asn Thr
65              70              75              80
Cys Phe Pro Gln Leu Thr Pro Gly Glu Glu Pro Gly Arg Leu Ser Asn

```

85 90 95  
Phe Asn Asp Ser Leu Val Ser Arg Leu Leu Arg Arg Arg Glu Ala Gly  
100 105 110

<210> 1733  
<211> 409  
<212> DNA  
<213> Homo sapiens

<400> 1733  
acgcgtgatg gccgatccga ctgtgcccg tcacgacccg cggcgctccga gtcctgaccc  
60  
ggacatgccg tggctgatcc gcgacatcac cctcggcaac aacgtgatcg cgggcagcac  
120  
gggcaactgc accctctgcg tcgaggacta ctcgcgaggg tacgcggcga ggatcctcaa  
180  
catcgtctcc gacggcaacg tctcgcagcg cgcacgggcc gcacagccag cgtggctggt  
240  
tggtgtggtc gcggggatca gcgaactccg atccgtacgt attctccagc ctgcagcctt  
300  
accggggcgac cactgggtttt taggaccttc gtcgggtctc gatcgatggc gtgctgtcac  
360  
cgcgcccgga gcgctgctcc cgggcattga tctcaaggcg gtcacgagg  
409

<210> 1734  
<211> 134  
<212> PRT  
<213> Homo sapiens

<400> 1734  
Met Ala Asp Pro Thr Val Pro Gly His Asp Pro Arg Arg Pro Ser Pro  
1 5 10 15  
Asp Pro Asp Met Pro Trp Leu Ile Arg Asp Ile Thr Leu Gly Asn Asn  
20 25 30  
Val Ile Ala Gly Ser Thr Gly Asn Cys Thr Leu Cys Val Glu Asp Tyr  
35 40 45  
Ser Arg Arg Tyr Ala Ala Arg Ile Leu Asn Ile Val Ser Asp Gly Asn  
50 55 60  
Val Leu Gln Arg Ala Ser Ala Ala Gln Pro Ala Trp Leu Val Gly Val  
65 70 75 80  
Val Ala Gly Ile Ser Glu Leu Arg Ser Val Arg Ile Leu Gln Pro Arg  
85 90 95  
Arg Leu Pro Gly Asp His Trp Phe Leu Gly Pro Ser Leu Gly Leu Asp  
100 105 110  
Arg Trp Arg Ala Val Thr Ala Ala Gly Ala Leu Leu Pro Gly Ile Asp  
115 120 125  
Leu Lys Ala Val Thr Arg  
130

<210> 1735  
<211> 342  
<212> DNA  
<213> Homo sapiens

&lt;400&gt; 1735

ggcgccatgg tcatcagcat catgtgttcg gcgcccgtg cacgaatgtt cgtgcgatca  
60  
agcgcgcctt ttagttcgac gcacggtaaa gcccggtgcg atcgatgtag gccaggaccg  
120  
cgtcaggcac caggaaacgt accgacttcc cgctggccgg cagttgacgg atctgggtgg  
180  
cggacaccgc aagcgggggtc tgccagacga atgcaatatt cccgttcggc ccggtcaggg  
240  
ccaaggggtc acttaccgac cgcgcgcca gcaggttgcg caaggcatcc ggcggttcgc  
300  
tggcggtatc cgggcgttgc aaaaccagga tgtggcaatg ct  
342

&lt;210&gt; 1736

&lt;211&gt; 112

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1736

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Val | Ile | Ser | Ile | Met | Cys | Ser | Ala | Pro | Ala | Ala | Arg | Met | Phe | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Arg | Ser | Ser | Ala | Pro | Phe | Ser | Ser | Thr | His | Gly | Lys | Ala | Arg | Ala | His |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Arg | Cys | Arg | Pro | Gly | Pro | Arg | Gln | Ala | Pro | Gly | Asn | Val | Pro | Thr | Ser |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Arg | Trp | Pro | Ala | Val | Asp | Gly | Ser | Gly | Trp | Arg | Thr | Pro | Gln | Ala | Gly |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Ser | Ala | Arg | Arg | Met | Gln | Tyr | Ser | Arg | Ser | Ala | Arg | Ser | Gly | Pro | Arg |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |     |
| Gly | His | Leu | Pro | Thr | Ala | Arg | Pro | Ala | Gly | Cys | Ala | Arg | His | Pro | Ala |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     | 95  |     |     |
| Val | Arg | Trp | Arg | His | Pro | Gly | Val | Ala | Lys | Pro | Gly | Cys | Gly | Asn | Ala |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

&lt;210&gt; 1737

&lt;211&gt; 506

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1737

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aggcagtacc acggcgaagg tcacgatcac cctgcgctaa cccttcaagc gtcttcagca  
240  
ccgacctata agtctcccag acacttttac gaccggccct ccccttggg gtgggccccg  
300  
tccttttcgt gtcgtgggat gcacctggca gcaccacctc cgcccccat ggagaacagt  
360



aggtatcctc gcagggtact acggccaagg catatttgac gttccacgct tgccactgcc  
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 506

<210> 1738  
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 <212> PRT  
 <213> Homo sapiens

<400> 1738  
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 Val Val Leu Pro Gly Ala Ser His Asp Thr Lys Arg Thr Gly Pro Thr  
 35 40 45  
 Pro Arg Gly Arg Ala Gly Arg Lys Ser Val Trp Glu Thr Tyr Arg Ser  
 50 55 60  
 Val Leu Lys Thr Leu Glu Gly Leu Ala Gln Gly Asp Arg Asp Leu Arg  
 65 70 75 80  
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 85 90 95  
 Val Gly Gly Asp Val Gly Ala Gly Arg Leu His Val Val Pro Val Gly  
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 Arg

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 <212> DNA  
 <213> Homo sapiens

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 gagtctgggc cattgggttag cacgtttaat tcaatagagg actattatca aacccatggt  
 180  
 cgagagtggg agtggttatgc catggttaaa gcccggtgta ttggtggtga ggacgagtat  
 240  
 aaacaagcgt tagaaaggat gttaaggcct ttcgtattta gacgttacat tgatttttagc  
 300  
 gctattgatt ctttgcgaaa aatgaaaacg atgatcagtg ctgaagttcg tcgcaagggg  
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 420

<210> 1740  
 <211> 140  
 <212> PRT

<213> Homo sapiens

<400> 1740

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Arg Val Ile Glu Asn Ala Ala Phe Phe Thr Lys Leu Gly Gln Arg Leu
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Ile Gly Ala Leu His Gln Val Thr Val Asp Gly Phe Val Tyr Arg Val
          20             25             30
Asp Met Arg Leu Arg Pro Phe Gly Glu Ser Gly Pro Leu Val Ser Thr
          35             40             45
Phe Asn Ser Ile Glu Asp Tyr Tyr Gln Thr His Gly Arg Glu Trp Glu
          50             55             60
Cys Tyr Ala Met Val Lys Ala Arg Val Ile Gly Val Glu Asp Glu Tyr
65             70             75             80
Lys Gln Ala Leu Glu Arg Met Leu Arg Pro Phe Val Phe Arg Arg Tyr
          85             90             95
Ile Asp Phe Ser Ala Ile Asp Ser Leu Arg Lys Met Lys Thr Met Ile
          100            105            110
Ser Ala Glu Val Arg Arg Lys Gly Leu Lys Asp Asn Ile Lys Leu Gly
          115            120            125
Met Gly Gly Ile Arg Glu Ile Glu Phe Val Ala Gln
          130            135            140

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<210> 1741

<211> 378

<212> DNA

<213> Homo sapiens

<400> 1741

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accgagacgg cccagcacga gcccacgggtg gcgctctatg gcggggggccc ggacgggtga
180
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240
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378

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<210> 1742

<211> 59

<212> PRT

<213> Homo sapiens

<400> 1742

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Xaa Arg Val Glu Val Ile Gln Ala Asp Ala Thr Asp Pro Leu Val Leu
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His Ser Leu Asn Gly Gln Val Asp Val Val Val Ser Asn Pro Pro Tyr
          20             25             30
Val Pro Ala Gly Ala Val Glu Asp Thr Glu Thr Ala Gln His Glu Pro

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<210> 1743  
<211> 4121  
<212> DNA  
<213> Homo sapiens

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180  
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240  
tcagggttca ggcgggtcct ccagaaactc cagaaggacg gacataggga gtgtgtcatc  
300  
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360  
acacctcgag acaagcagaa ccttcacgag aacctccagg gccttggacc cgggggtccgg  
420  
gtggagagcc tggagctggc catccggaaa gagatccacg actttgcccc gctgagcgag  
480  
aacacatacc atgtgtacca taacaccgag gacctgtggg gggagcccc tgetgtggcc  
540  
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 4121

&lt;210&gt; 1744

&lt;211&gt; 796

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1744

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Thr | Tyr | Asn | Cys | Lys | Glu | Glu | Phe | Gln | Ile | His | Asp | Glu | Leu | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Lys | Ala | His | Tyr | Thr | Leu | Gly | Arg | Leu | Ser | Asp | Asn | Thr | Pro | Glu | His |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Tyr | Leu | Val | Gln | Gly | Arg | Tyr | Phe | Leu | Val | Arg | Asp | Val | Thr | Glu | Lys |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Met | Asp | Val | Leu | Gly | Thr | Val | Gly | Ser | Cys | Gly | Ala | Pro | Asn | Phe | Arg |

|         |         |         |         |         |         |         |         |  |  |    |  |  |  |  |  |  |  |
|---------|---------|---------|---------|---------|---------|---------|---------|--|--|----|--|--|--|--|--|--|--|
| 50      |         |         |         |         | 55      |         |         |  |  | 60 |  |  |  |  |  |  |  |
| Gln Val | Gln Gly | Gly Leu | Thr Val | Phe Gly | Met Gly | Gln Pro | Ser Leu |  |  |    |  |  |  |  |  |  |  |
| 65      |         |         | 70      |         | 75      |         | 80      |  |  |    |  |  |  |  |  |  |  |
| Ser Gly | Phe Arg | Arg Val | Leu Gln | Lys Leu | Gln Lys | Asp Gly | His Arg |  |  |    |  |  |  |  |  |  |  |
|         |         | 85      |         |         | 90      |         | 95      |  |  |    |  |  |  |  |  |  |  |
| Glu Cys | Val Ile | Phe Cys | Val Arg | Glu Glu | Pro Val | Leu Phe | Leu Arg |  |  |    |  |  |  |  |  |  |  |
|         | 100     |         |         | 105     |         | 110     |         |  |  |    |  |  |  |  |  |  |  |
| Ala Asp | Glu Asp | Phe Val | Ser Tyr | Thr Pro | Arg Asp | Lys Gln | Asn Leu |  |  |    |  |  |  |  |  |  |  |
|         | 115     |         |         | 120     |         | 125     |         |  |  |    |  |  |  |  |  |  |  |
| His Glu | Asn Leu | Gln Gly | Leu Gly | Pro Gly | Val Arg | Val Glu | Ser Leu |  |  |    |  |  |  |  |  |  |  |
|         | 130     |         |         | 135     |         | 140     |         |  |  |    |  |  |  |  |  |  |  |
| Glu Leu | Ala Ile | Arg Lys | Glu Ile | His Asp | Phe Ala | Gln Leu | Ser Glu |  |  |    |  |  |  |  |  |  |  |
|         | 145     |         |         | 150     |         | 155     |         |  |  |    |  |  |  |  |  |  |  |
| Asn Thr | Tyr His | Val Tyr | His Asn | Thr Glu | Asp Leu | Trp Gly | Glu Pro |  |  |    |  |  |  |  |  |  |  |
|         |         | 165     |         |         | 170     |         | 175     |  |  |    |  |  |  |  |  |  |  |
| His Ala | Val Ala | Ile His | Gly Glu | Asp Asp | Leu His | Val Thr | Glu Glu |  |  |    |  |  |  |  |  |  |  |
|         |         | 180     |         |         | 185     |         | 190     |  |  |    |  |  |  |  |  |  |  |
| Val Tyr | Lys Arg | Pro Leu | Phe Leu | Gln Pro | Thr Tyr | Arg Tyr | His Arg |  |  |    |  |  |  |  |  |  |  |
|         | 195     |         |         | 200     |         | 205     |         |  |  |    |  |  |  |  |  |  |  |
| Leu Pro | Leu Pro | Glu Gln | Gly Ser | Pro Leu | Glu Ala | Gln Leu | Asp Ala |  |  |    |  |  |  |  |  |  |  |
|         | 210     |         |         | 215     |         | 220     |         |  |  |    |  |  |  |  |  |  |  |
| Phe Val | Ser Val | Leu Arg | Glu Thr | Pro Ser | Leu Leu | Gln Leu | Arg Asp |  |  |    |  |  |  |  |  |  |  |
|         | 225     |         |         | 230     |         | 235     |         |  |  |    |  |  |  |  |  |  |  |
| Ala His | Gly Pro | Pro Ala | Leu Val | Phe Ser | Cys Gln | Met Gly | Val Val |  |  |    |  |  |  |  |  |  |  |
|         |         | 245     |         |         | 250     |         | 255     |  |  |    |  |  |  |  |  |  |  |
| Gly Arg | Thr Asn | Leu Gly | Met Val | Leu Gly | Thr Leu | Ile Leu | Leu His |  |  |    |  |  |  |  |  |  |  |
|         |         | 260     |         |         | 265     |         | 270     |  |  |    |  |  |  |  |  |  |  |
| Arg Ser | Gly Thr | Thr Ser | Gln Pro | Glu Ala | Ala Pro | Thr Gln | Ala Lys |  |  |    |  |  |  |  |  |  |  |
|         | 275     |         |         | 280     |         | 285     |         |  |  |    |  |  |  |  |  |  |  |
| Pro Leu | Pro Met | Glu Gln | Phe Gln | Val Ile | Gln Ser | Phe Leu | Arg Met |  |  |    |  |  |  |  |  |  |  |
|         | 290     |         |         | 295     |         | 300     |         |  |  |    |  |  |  |  |  |  |  |
| Val Pro | Gln Gly | Arg Arg | Met Val | Glu Glu | Val Asp | Arg Ala | Ile Thr |  |  |    |  |  |  |  |  |  |  |
|         | 305     |         |         | 310     |         | 315     |         |  |  |    |  |  |  |  |  |  |  |
| Ala Cys | Ala Glu | Leu His | Asp Leu | Lys Glu | Val Val | Leu Glu | Asn Gln |  |  |    |  |  |  |  |  |  |  |
|         |         | 325     |         |         | 330     |         | 335     |  |  |    |  |  |  |  |  |  |  |
| Lys Lys | Leu Glu | Gly Ile | Arg Pro | Glu Ser | Pro Ala | Gln Gly | Ser Gly |  |  |    |  |  |  |  |  |  |  |
|         |         | 340     |         |         | 345     |         | 350     |  |  |    |  |  |  |  |  |  |  |
| Ser Arg | His Ser | Val Trp | Gln Arg | Ala Leu | Trp Ser | Leu Glu | Arg Tyr |  |  |    |  |  |  |  |  |  |  |
|         | 355     |         |         | 360     |         | 365     |         |  |  |    |  |  |  |  |  |  |  |
| Phe Tyr | Leu Ile | Leu Phe | Asn Tyr | Tyr Leu | His Glu | Gln Tyr | Pro Leu |  |  |    |  |  |  |  |  |  |  |
|         | 370     |         |         | 375     |         | 380     |         |  |  |    |  |  |  |  |  |  |  |
| Ala Phe | Ala Leu | Ser Phe | Ser Arg | Trp Leu | Cys Ala | His Pro | Glu Leu |  |  |    |  |  |  |  |  |  |  |
|         | 385     |         |         | 390     |         | 395     |         |  |  |    |  |  |  |  |  |  |  |
| Tyr Arg | Leu Pro | Val Thr | Leu Ser | Ser Ala | Gly Pro | Val Ala | Pro Arg |  |  |    |  |  |  |  |  |  |  |
|         |         | 405     |         |         | 410     |         | 415     |  |  |    |  |  |  |  |  |  |  |
| Asp Leu | Ile Ala | Arg Gly | Ser Leu | Arg Glu | Asp Asp | Leu Val | Ser Pro |  |  |    |  |  |  |  |  |  |  |
|         |         | 420     |         |         | 425     |         | 430     |  |  |    |  |  |  |  |  |  |  |
| Asp Ala | Leu Ser | Thr Val | Arg Glu | Met Asp | Val Ala | Asn Phe | Arg Arg |  |  |    |  |  |  |  |  |  |  |
|         |         | 435     |         |         | 440     |         | 445     |  |  |    |  |  |  |  |  |  |  |
| Val Pro | Arg Met | Pro Ile | Tyr Gly | Thr Ala | Gln Pro | Ser Ala | Lys Ala |  |  |    |  |  |  |  |  |  |  |
|         | 450     |         |         | 455     |         | 460     |         |  |  |    |  |  |  |  |  |  |  |
| Leu Gly | Ser Ile | Leu Ala | Tyr Leu | Thr Asp | Ala Lys | Arg Arg | Leu Arg |  |  |    |  |  |  |  |  |  |  |
|         | 465     |         |         | 470     |         | 475     |         |  |  |    |  |  |  |  |  |  |  |
| Lys Val | Val Trp | Val Ser | Leu Arg | Glu Glu | Ala Val | Leu Glu | Cys Asp |  |  |    |  |  |  |  |  |  |  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
|     |     |     |     | 485 |     |     |     |     |     | 490 |     |     |     |     | 495 |  |  |  |  |
| Gly | His | Thr | Tyr | Ser | Leu | Arg | Trp | Pro | Gly | Pro | Pro | Val | Ala | Pro | Asp |  |  |  |  |
|     |     |     | 500 |     |     |     |     | 505 |     |     |     |     | 510 |     |     |  |  |  |  |
| Gln | Leu | Glu | Thr | Leu | Glu | Ala | Gln | Leu | Lys | Ala | His | Leu | Ser | Glu | Pro |  |  |  |  |
|     |     | 515 |     |     |     |     | 520 |     |     |     |     | 525 |     |     |     |  |  |  |  |
| Pro | Pro | Gly | Lys | Glu | Gly | Pro | Leu | Thr | Tyr | Arg | Phe | Gln | Thr | Cys | Leu |  |  |  |  |
|     | 530 |     |     |     |     | 535 |     |     |     | 540 |     |     |     |     |     |  |  |  |  |
| Thr | Met | Gln | Glu | Val | Phe | Ser | Gln | His | Arg | Arg | Ala | Cys | Pro | Gly | Leu |  |  |  |  |
| 545 |     |     |     |     | 550 |     |     |     | 555 |     |     |     |     |     | 560 |  |  |  |  |
| Thr | Tyr | His | Arg | Ile | Pro | Met | Pro | Asp | Phe | Cys | Ala | Pro | Arg | Glu | Glu |  |  |  |  |
|     |     |     | 565 |     |     |     |     | 570 |     |     |     |     |     | 575 |     |  |  |  |  |
| Asp | Phe | Asp | Gln | Leu | Leu | Glu | Ala | Leu | Arg | Ala | Ala | Leu | Ser | Lys | Asp |  |  |  |  |
|     |     | 580 |     |     |     |     | 585 |     |     |     |     | 590 |     |     |     |  |  |  |  |
| Pro | Gly | Thr | Gly | Phe | Val | Phe | Ser | Cys | Leu | Ser | Gly | Gln | Gly | Arg | Thr |  |  |  |  |
|     |     | 595 |     |     |     |     | 600 |     |     |     |     | 605 |     |     |     |  |  |  |  |
| Thr | Thr | Ala | Met | Val | Val | Ala | Val | Leu | Ala | Phe | Trp | His | Ile | Gln | Gly |  |  |  |  |
|     | 610 |     |     |     |     | 615 |     |     |     |     | 620 |     |     |     |     |  |  |  |  |
| Phe | Pro | Glu | Val | Gly | Glu | Glu | Glu | Leu | Val | Ser | Val | Pro | Asp | Ala | Lys |  |  |  |  |
| 625 |     |     |     | 630 |     |     |     |     | 635 |     |     |     |     |     | 640 |  |  |  |  |
| Phe | Thr | Lys | Gly | Glu | Phe | Gln | Val | Val | Met | Lys | Val | Val | Gln | Leu | Leu |  |  |  |  |
|     |     |     | 645 |     |     |     |     | 650 |     |     |     |     | 655 |     |     |  |  |  |  |
| Pro | Asp | Gly | His | Arg | Val | Lys | Lys | Glu | Val | Asp | Ala | Ala | Leu | Asp | Thr |  |  |  |  |
|     |     | 660 |     |     |     |     | 665 |     |     |     |     |     | 670 |     |     |  |  |  |  |
| Val | Ser | Glu | Thr | Met | Thr | Pro | Met | His | Tyr | His | Leu | Arg | Glu | Ile | Ile |  |  |  |  |
|     |     | 675 |     |     |     |     | 680 |     |     |     |     |     | 685 |     |     |  |  |  |  |
| Ile | Cys | Thr | Tyr | Arg | Gln | Ala | Lys | Ala | Ala | Lys | Glu | Ala | Gln | Glu | Met |  |  |  |  |
|     | 690 |     |     |     |     | 695 |     |     |     |     | 700 |     |     |     |     |  |  |  |  |
| Arg | Arg | Leu | Gln | Leu | Arg | Ser | Leu | Gln | Tyr | Leu | Glu | Arg | Tyr | Val | Cys |  |  |  |  |
| 705 |     |     |     | 710 |     |     |     |     | 715 |     |     |     |     |     | 720 |  |  |  |  |
| Leu | Ile | Leu | Phe | Asn | Ala | Tyr | Leu | His | Leu | Glu | Lys | Ala | Asp | Ser | Trp |  |  |  |  |
|     |     |     | 725 |     |     |     |     | 730 |     |     |     |     | 735 |     |     |  |  |  |  |
| Gln | Arg | Pro | Phe | Ser | Thr | Trp | Met | Gln | Glu | Val | Ala | Ser | Lys | Ala | Gly |  |  |  |  |
|     |     | 740 |     |     |     |     | 745 |     |     |     |     |     | 750 |     |     |  |  |  |  |
| Ile | Tyr | Glu | Ile | Leu | Asn | Glu | Leu | Gly | Phe | Pro | Glu | Leu | Glu | Ser | Gly |  |  |  |  |
|     | 755 |     |     |     |     |     | 760 |     |     |     |     |     | 765 |     |     |  |  |  |  |
| Glu | Asp | Gln | Pro | Phe | Ser | Arg | Leu | Arg | Tyr | Arg | Trp | Gln | Glu | Gln | Ser |  |  |  |  |
|     | 770 |     |     |     |     | 775 |     |     |     |     | 780 |     |     |     |     |  |  |  |  |
| Cys | Ser | Leu | Glu | Pro | Ser | Ala | Pro | Glu | Asp | Leu | Leu |     |     |     |     |  |  |  |  |
| 785 |     |     |     |     | 790 |     |     |     |     |     | 795 |     |     |     |     |  |  |  |  |

&lt;210&gt; 1745

&lt;211&gt; 426

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1745

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ntcatgaaaa ttaaaaaatg gcttggtgta gcagcccttg ctacagtcgc aggtttggct
60
cttgagctt gcggaaactc agaaaagaaa gcagacaatg caacaactat caaaatcgca
120
actgttaacc gtagcggttc tgaagaaaaa cggtgggaca aaatccaaga attggttaaa
180
aaagacggta tcactttgga atttacggag ttcacaggct actcacaacc aaacaaggca
240

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actgctgatg gcgaagtaga tttgaacgct ttccaacact ataacttctt gaacaactgg  
 300  
 aacaaagaaa acgggaaaga ccttgtagcg attgcagata cttacatctc tccaatccgt  
 360  
 ctttactcag gtttgaatgg aagtgacaac aagtacacta aagtagaggc tggagtgtgc  
 420  
 tcgcga  
 426

<210> 1746  
 <211> 142  
 <212> PRT  
 <213> Homo sapiens

<400> 1746  
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 1 5 10 15  
 Ala Gly Leu Ala Leu Ala Ala Cys Gly Asn Ser Glu Lys Lys Ala Asp  
 20 25 30  
 Asn Ala Thr Thr Ile Lys Ile Ala Thr Val Asn Arg Ser Gly Ser Glu  
 35 40 45  
 Glu Lys Arg Trp Asp Lys Ile Gln Glu Leu Val Lys Lys Asp Gly Ile  
 50 55 60  
 Thr Leu Glu Phe Thr Glu Phe Thr Gly Tyr Ser Gln Pro Asn Lys Ala  
 65 70 75 80  
 Thr Ala Asp Gly Glu Val Asp Leu Asn Ala Phe Gln His Tyr Asn Phe  
 85 90 95  
 Leu Asn Asn Trp Asn Lys Glu Asn Gly Lys Asp Leu Val Ala Ile Ala  
 100 105 110  
 Asp Thr Tyr Ile Ser Pro Ile Arg Leu Tyr Ser Gly Leu Asn Gly Ser  
 115 120 125  
 Asp Asn Lys Tyr Thr Lys Val Glu Ala Gly Val Cys Ser Arg  
 130 135 140

<210> 1747  
 <211> 373  
 <212> DNA  
 <213> Homo sapiens

<400> 1747  
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 atcaccgccc ctgaaggcgt gttggaggca ccggcggggt cgctcctcaa ggacggcacg  
 120  
 tggcacatca tgtaccagta cgaaccacac gcggatgggc acggcctctg gggacatgtc  
 180  
 acttccccca acttctctcc ctttaactgg acagacggag aagacattct ggttccagag  
 240  
 ggcgaggaaa ccgacctgtg ggcaggttct gttattagca acgctggaaa agtgacgctg  
 300  
 ttttttacct ccgtcaaggg cgacnaagac ggaaatccat cgggcagatg tcgccgacgg  
 360  
 caaagctacg cgt  
 373



<210> 1748  
 <211> 113  
 <212> PRT  
 <213> Homo sapiens

<400> 1748  
 Met Val Thr His Arg Pro Glu Leu His Ile Thr Ala Pro Glu Gly Val  
 1 5 10 15  
 Leu Glu Ala Pro Ala Gly Ser Leu Leu Lys Asp Gly Thr Trp His Ile  
 20 25 30  
 Met Tyr Gln Tyr Glu Pro His Ala Asp Gly His Gly Leu Trp Gly His  
 35 40 45  
 Val Thr Ser Pro Asn Phe Ser Pro Phe Asn Trp Thr Asp Gly Glu Asp  
 50 55 60  
 Ile Leu Val Pro Glu Gly Glu Glu Thr Asp Leu Trp Ala Gly Ser Val  
 65 70 75 80  
 Ile Ser Asn Ala Gly Lys Val Thr Leu Phe Phe Thr Ser Val Lys Gly  
 85 90 95  
 Asp Xaa Asp Gly Asn Pro Ser Gly Arg Cys Arg Arg Arg Gln Ser Tyr  
 100 105 110  
 Ala

<210> 1749  
 <211> 853  
 <212> DNA  
 <213> Homo sapiens

<400> 1749  
 cccagcaggc aaagagagag gcctccctgg cttcgagtgt caggggagcc gcgttcctc  
 60  
 ccagggctgg agcagaggac cacaaggcag cagaaagcgc ggggccagat gagggccagg  
 120  
 aaggggagga gaggtagggc caagaacgag ccttaagggg gcagtcctaa gctggagcca  
 180  
 cccagggctg ggtctgggag tcctcagtgt ccacttggtc caggttaggg ggcttgcctt  
 240  
 gctctctcca gggccagtct ctgtgtgtgg ggactcagcc cgtggccggc agatgccatc  
 300  
 caggatgtac aagggtgcagc caaggcaggc catgcagggg ccgggcctgt ctgcagctgg  
 360  
 tggatgctg tgggcatggc tttctctggg gaccccatc ctgtcagtag caaccctggc  
 420  
 agtgtccgga gcggctctag acaactttgg tcataggaac tctggagggt ggttctggtc  
 480  
 atctgagggt gctactcaac aggtttgagg cccacagca acagaagtcc aggacccact  
 540  
 aggttgctc agaagcccta agactgatga gctggagcgc gcatttgaga gaagcctcgc  
 600  
 accactgtg tactggcccc gctcaggccg gcctggcaca ccgttgctg ctggcggctc  
 660  
 tcatggggaa gcgcctgggc actggggatt gcttgtgggc cactcaactc ttggggcagt  
 720

ggccgtaacc ctagtttgcc tgaggccctt atgtcccctt atgttcctgg tactggagct  
 780  
 tgagctcttg cctggcacgc tgcagctgca cccaccctgc ttgatccac ctgggaggcc  
 840  
 aggacactga gga  
 853

<210> 1750  
 <211> 64  
 <212> PRT  
 <213> Homo sapiens

<400> 1750  
 Glu Lys Pro Arg Thr His Cys Val Leu Ala Pro Leu Arg Pro Ala Trp  
 1 5 10 15  
 His Thr Val Ala Cys Trp Arg Leu Ser Trp Gly Ser Ala Trp Ala Leu  
 20 25 30  
 Gly Ile Ala Cys Gly Pro Leu Asn Ser Trp Gly Ser Gly Arg Asn Pro  
 35 40 45  
 Ser Leu Pro Glu Ala Leu Met Ser Pro Tyr Val Pro Gly Thr Gly Ala  
 50 55 60

<210> 1751  
 <211> 531  
 <212> DNA  
 <213> Homo sapiens

<400> 1751  
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 120  
 gcatggtctt ccctgtcagg aggagagagg caacgggtac agctggctcg tgccttggca  
 180  
 caggagcccg agatcttatt tcttgacgag ccgacaaatc accttgactt gccacaccag  
 240  
 atcgacctcc tggagcgggt ccgaggactc ggctgacga cggtcaccgt cattcatgac  
 300  
 ctcgacttgg ctgccgccta cgccgacgac ctcatcgtgc tcgactcggg tcgcatggtt  
 360  
 gctggcggac cggcgagcac agtgctgacg cctggccttg tccgtgacca ctttgggtgc  
 420  
 gacggtgagg tttggtcctc ctcgaggcgc ggcttcacct ggaacgggct gcagacatga  
 480  
 cgacgcgtat cgcagtatcc ctccgatggg acgacgccat tgacttgagc c  
 531

<210> 1752  
 <211> 159  
 <212> PRT  
 <213> Homo sapiens

<400> 1752  
 Gly Arg Ile Pro His Leu Gly Arg Trp Arg Met Gly Asn Phe Ser Arg

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      1           5           10           15
Arg Gln Gly His Asp Asp Ala Val Val Glu Lys Ala Met Ala Thr Thr
      20           25           30
Gly Val Ser Glu Leu Thr Asp Arg Ala Trp Ser Ser Leu Ser Gly Gly
      35           40           45
Glu Arg Gln Arg Val Gln Leu Ala Arg Ala Leu Ala Gln Glu Pro Glu
      50           55           60
Ile Leu Phe Leu Asp Glu Pro Thr Asn His Leu Asp Leu Pro His Gln
      65           70           75           80
Ile Asp Leu Leu Glu Arg Val Arg Gly Leu Gly Leu Thr Thr Val Thr
      85           90           95
Val Ile His Asp Leu Asp Leu Ala Ala Ala Tyr Ala Asp Asp Leu Ile
      100          105          110
Val Leu Asp Ser Gly Arg Met Val Ala Gly Gly Pro Ala Ser Thr Val
      115          120          125
Leu Thr Pro Gly Leu Val Arg Asp His Phe Gly Val Asp Gly Glu Val
      130          135          140
Trp Ser Ser Ser Arg Arg Gly Phe Thr Trp Asn Gly Leu Gln Thr
      145          150          155

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&lt;210&gt; 1753

&lt;211&gt; 920

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1753

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60
tgggacccga tggctctggg gactcagggc cgctgtctgc tggacagggg ttccaaggac
120
acacagacca ggatcagcca aaagggccgc cgtctgcagc ccccggggac tccctcggcc
180
ccaccccgga gaagggcccg gaaacagctg aaccctgcc ggggcaccga gagagtggac
240
cctgggttgc aggggggtgac tctgaagttt cagataaagc cggactccag cctgcagatc
300
atccccacgt acagcctgcc ctgcagtagc cgttctcagg aatccccctgc agatgctgtt
360
gggggcentg cagccatccc agagggcacc gagggccact cagcaggcag cgaggccctg
420
gagccccggc gctgtgcttc ctgtcggacc cagaggaccc cgctctggag agacgctgaa
480
gatgggaccc ttctctgcaa cgctgtggg atcaggtaca agaaatacgg cactcgtctg
540
tccagctgct ggctgggtgcc caggaaaaat gtccagccca agaggctatg tggcagatgt
600
ggagtgtccc tggaccccat tcaggaaggt taaaccagc ttcaccctgc tgagctgctg
660
cttctgcctc cgtttcacca gtgggagaat gggcagaagc agctctccta ggaggattgg
720
ggaaagagcc ggctgcctc ctctctgcca tctccagatt caaggatccc gggggaagac
780
ccaggcctca ggtggcagag cctgctaggg gtcaccagcc ccttctccag tcagccttgg
840

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ccgaggcccc ctcaggagac gctctcagga aggatgagca ttgttacagc agggacaata  
 900  
 aagtacagag atatgccgag  
 920

<210> 1754  
 <211> 210  
 <212> PRT  
 <213> Homo sapiens

<400> 1754  
 Glu Thr Val Glu Arg Leu Gly Gln Ser Pro Ala Gln Asp Thr Pro Val  
 1 5 10 15  
 Leu Gly Pro Cys Trp Asp Pro Met Ala Leu Gly Thr Gln Gly Arg Leu  
 20 25 30  
 Leu Leu Asp Arg Asp Ser Lys Asp Thr Gln Thr Arg Ile Ser Gln Lys  
 35 40 45  
 Gly Arg Arg Leu Gln Pro Pro Gly Thr Pro Ser Ala Pro Pro Gln Arg  
 50 55 60  
 Arg Pro Arg Lys Gln Leu Asn Pro Cys Arg Gly Thr Glu Arg Val Asp  
 65 70 75 80  
 Pro Gly Phe Glu Gly Val Thr Leu Lys Phe Gln Ile Lys Pro Asp Ser  
 85 90 95  
 Ser Leu Gln Ile Ile Pro Thr Tyr Ser Leu Pro Cys Ser Ser Arg Ser  
 100 105 110  
 Gln Glu Ser Pro Ala Asp Ala Val Gly Gly Xaa Ala Ala Ile Pro Glu  
 115 120 125  
 Gly Thr Glu Gly His Ser Ala Gly Ser Glu Ala Leu Glu Pro Arg Arg  
 130 135 140  
 Cys Ala Ser Cys Arg Thr Gln Arg Thr Pro Leu Trp Arg Asp Ala Glu  
 145 150 155 160  
 Asp Gly Thr Leu Leu Cys Asn Ala Cys Gly Ile Arg Tyr Lys Lys Tyr  
 165 170 175  
 Gly Thr Arg Cys Ser Ser Cys Trp Leu Val Pro Arg Lys Asn Val Gln  
 180 185 190  
 Pro Lys Arg Leu Cys Gly Arg Cys Gly Val Ser Leu Asp Pro Ile Gln  
 195 200 205  
 Glu Gly  
 210

<210> 1755  
 <211> 437  
 <212> DNA  
 <213> Homo sapiens

<400> 1755  
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 120  
 ttggttgatga cagattttct accaacaatg ccttgactt gcctgcaa atgttgtagat  
 180  
 gttgcaggta gctttggcct ccataaccaa gaactcaata ttagtttaac ttcaataggt  
 240

ttattgtgga atatttcaga ttattttttc caaagagggg aaactattga aaaagaacta  
 300  
 aataaggaag aggcagcaca gcaaaagcag gcagaagaga aaggagttgt tttaaatcgg  
 360  
 ccattccacc ctgcaccgcc atttgattgc ttgtgggttat gtctttatgc aaaattgggt  
 420  
 gaactatgtg tggatcc  
 437

<210> 1756  
 <211> 126  
 <212> PRT  
 <213> Homo sapiens

<400> 1756  
 Met Gly Ala Ile Arg Asn Asp Gln Gly Glu Ser Leu Ile Arg Thr Ala  
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 Phe Gln Cys Leu Gln Leu Val Val Thr Asp Phe Leu Pro Thr Met Pro  
 20 25 30  
 Cys Thr Cys Leu Gln Ile Val Val Asp Val Ala Gly Ser Phe Gly Leu  
 35 40 45  
 His Asn Gln Glu Leu Asn Ile Ser Leu Thr Ser Ile Gly Leu Leu Trp  
 50 55 60  
 Asn Ile Ser Asp Tyr Phe Phe Gln Arg Gly Glu Thr Ile Glu Lys Glu  
 65 70 75 80  
 Leu Asn Lys Glu Glu Ala Ala Gln Gln Lys Gln Ala Glu Glu Lys Gly  
 85 90 95  
 Val Val Leu Asn Arg Pro Phe His Pro Ala Pro Pro Phe Asp Cys Leu  
 100 105 110  
 Trp Leu Cys Leu Tyr Ala Lys Leu Gly Glu Leu Cys Val Asp  
 115 120 125

<210> 1757  
 <211> 1297  
 <212> DNA  
 <213> Homo sapiens

<400> 1757  
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 gcgcacagca tccatggcac caaccctcaa tatctggtgg agaagatcat tcgaacgcga  
 120  
 atctatgagt ccaagtactg gaaagaggag tgctttggac ttacagctga acttgtagtc  
 180  
 gataaaagcca tggagttaag gtttgtgggt ggcgtctatg gtggcaacat aaaaccaaca  
 240  
 ccctttctgt gtttaacctt gaagatgctt caaattcaac ccgagaagga tatcattgta  
 300  
 gagtttatca aaaatgaaga tttcaagtat gtccgcatgc tgggggcact ttacatgagg  
 360  
 ctgacaggca ctgcaattga ttgctacaag tacttggaac ctttgtacaa tgactatcga  
 420  
 aaaatcaaga gccagaaccg aaatggggag tttgaattga tgcattgtga tgagtttatt  
 480

gatgaactat tgcacagtga gagagtctgt gatatcattc tgccccgact acagaaacgc  
 540  
 tatgtattag aggaagctga gcaactggag cctcgagtta gtgctctgga agaggacatg  
 600  
 gatgatgtgg agtccagtga agaggaagaa gaggaggatg agaagttgga aagagtgcc  
 660  
 tcacctgac accgccggag aagctaccga gacttggaca agccccgtcg ctctcccaca  
 720  
 ctgcgctaca ggaggagtag gagccggtct cccagaaggc ggagtcgac tcccaaaagg  
 780  
 agaagcccc cccctcgccg agaaaggcat cggagcaaga gtccaagacg tcaccgcagc  
 840  
 aggtcccag atcggcggca cagatcccgt tccaagtccc caggtcatca ccgtagtcac  
 900  
 agacacagga gccactcaaa gtctcccgaa aggtctaaga agagccacaa gaagagccgg  
 960  
 agaggggaatg agtaatggac tcagtttggg tttagtccac atggcctcct gtggatataa  
 1020  
 ggatatctgt atgtggaagg attaagatct cccccaggca gctataagaa tatttttagt  
 1080  
 tttttcttat caagtttctc aacctttatt tttaatgaag gaggtgctga gttttgtatc  
 1140  
 tttttaatca taatcaacat cagtttttga cccaactaac cttgactgta ttcaaactta  
 1200  
 tgagagtata aaggatctgg aggttgggga tatgactgac aaggaaaggc tgtggccacc  
 1260  
 tgatgaccct ttcccttttt attaaaccgg acacacc  
 1297

&lt;210&gt; 1758

&lt;211&gt; 312

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1758

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Asn | Arg | Thr | Val | Lys | Asp | Ala | His | Ser | Ile | His | Gly | Thr | Asn |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Pro | Gln | Tyr | Leu | Val | Glu | Lys | Ile | Ile | Arg | Thr | Arg | Ile | Tyr | Glu | Ser |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Lys | Tyr | Trp | Lys | Glu | Glu | Cys | Phe | Gly | Leu | Thr | Ala | Glu | Leu | Val | Val |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Asp | Lys | Ala | Met | Glu | Leu | Arg | Phe | Val | Gly | Gly | Val | Tyr | Gly | Gly | Asn |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Ile | Lys | Pro | Thr | Pro | Phe | Leu | Cys | Leu | Thr | Leu | Lys | Met | Leu | Gln | Ile |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Gln | Pro | Glu | Lys | Asp | Ile | Ile | Val | Glu | Phe | Ile | Lys | Asn | Glu | Asp | Phe |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     | 95  |     |     |
| Lys | Tyr | Val | Arg | Met | Leu | Gly | Ala | Leu | Tyr | Met | Arg | Leu | Thr | Gly | Thr |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Ala | Ile | Asp | Cys | Tyr | Lys | Tyr | Leu | Glu | Pro | Leu | Tyr | Asn | Asp | Tyr | Arg |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Lys | Ile | Lys | Ser | Gln | Asn | Arg | Asn | Gly | Glu | Phe | Glu | Leu | Met | His | Val |
|     | 130 |     |     |     | 135 |     |     |     |     |     | 140 |     |     |     |     |
| Asp | Glu | Phe | Ile | Asp | Glu | Leu | Leu | His | Ser | Glu | Arg | Val | Cys | Asp | Ile |

145                      150                      155                      160  
 Ile Leu Pro Arg Leu Gln Lys Arg Tyr Val Leu Glu Glu Ala Glu Gln  
                                  165                      170                      175  
 Leu Glu Pro Arg Val Ser Ala Leu Glu Glu Asp Met Asp Asp Val Glu  
                                  180                      185                      190  
 Ser Ser Glu Glu Glu Glu Glu Glu Asp Glu Lys Leu Glu Arg Val Pro  
                                  195                      200                      205  
 Ser Pro Asp His Arg Arg Arg Ser Tyr Arg Asp Leu Asp Lys Pro Arg  
                                  210                      215                      220  
 Arg Ser Pro Thr Leu Arg Tyr Arg Arg Ser Arg Ser Arg Ser Pro Arg  
 225                                   230                                   235                                   240  
 Arg Arg Ser Arg Ser Pro Lys Arg Arg Ser Pro Ser Pro Arg Arg Glu  
                                  245                                   250                                   255  
 Arg His Arg Ser Lys Ser Pro Arg Arg His Arg Ser Arg Ser Arg Asp  
                                  260                                   265                                   270  
 Arg Arg His Arg Ser Arg Ser Lys Ser Pro Gly His His Arg Ser His  
                                  275                                   280                                   285  
 Arg His Arg Ser His Ser Lys Ser Pro Glu Arg Ser Lys Lys Ser His  
                                  290                                   295                                   300  
 Lys Lys Ser Arg Arg Gly Asn Glu  
 305                                   310

<210> 1759

<211> 324

<212> DNA

<213> Homo sapiens

<400> 1759

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 60  
 ggccctgggca gacacaatta ttgtcgggaat ccagatggtg atgccagacc ttggtgccat  
 120  
 gtgatgaagg accgaaagct gacgtgggaa tactgtgaca tgtcccatg ctccacctgt  
 180  
 ggccctgaggc agtgcaaagc gcctcagttt agaactaaag gaggactcta cacagacatc  
 240  
 acctcacacc cttggcaggc tgccatcttt gtcagcaaca agaggtctcc tggagagaga  
 300  
 ttcctttgtg gaggggtgct gatc  
 324

<210> 1760

<211> 108

<212> PRT

<213> Homo sapiens

<400> 1760

Asn Ser Ile Val Leu Met Gly Lys Ser Tyr Thr Ala Trp Arg Thr Asn  
 1                      5                      10                      15  
 Ser Gln Ala Leu Gly Leu Gly Arg His Asn Tyr Cys Arg Asn Pro Asp  
                                  20                                   25                                   30  
 Gly Asp Ala Arg Pro Trp Cys His Val Met Lys Asp Arg Lys Leu Thr  
                                  35                                   40                                   45  
 Trp Glu Tyr Cys Asp Met Ser Pro Cys Ser Thr Cys Gly Leu Arg Gln

50                                      55                                      60  
 Cys Lys Arg Pro Gln Phe Arg Thr Lys Gly Gly Leu Tyr Thr Asp Ile  
 65                                      70                                      75                                      80  
 Thr Ser His Pro Trp Gln Ala Ala Ile Phe Val Ser Asn Lys Arg Ser  
                                     85                                      90                                      95  
 Pro Gly Glu Arg Phe Leu Cys Gly Gly Val Leu Ile  
                                     100                                      105

<210> 1761  
 <211> 351  
 <212> DNA  
 <213> Homo sapiens

<400> 1761  
 ngcgatctcg gctcactaca acctcgggtga cagagcgaga ctctatccca aaaaaataaa  
 60  
 aataaaaaatc aactggagaa ggaaatgggg ttggggagca tcctctgaat atataaaggg  
 120  
 agccattcat ttaggagag gaggtagaag gaaatgctgt ttgtcgatgg ttcttttcca  
 180  
 gagaggaaga gaggagaaag gaagagcggg gagcaggtgg ggagcccgca gtaagacccc  
 240  
 acagtggggc caggtggtct tgcaccctgt attcccactt tggctggggc agcccagagt  
 300  
 ccaggccagc aggtaatgcc ccagccatgc cactcggtc ctattggatc c  
 351

<210> 1762  
 <211> 109  
 <212> PRT  
 <213> Homo sapiens

<400> 1762  
 Met Ala Gly Ala Leu Pro Ala Gly Leu Asp Ser Gly Leu Pro Gln Pro  
 1                                      5                                      10                                      15  
 Lys Trp Glu Tyr Arg Val Gln Asp His Leu Ala Pro Leu Trp Gly Leu  
                                     20                                      25                                      30  
 Thr Ala Gly Ser Pro Pro Ala Pro Arg Ser Ser Phe Leu Leu Ser Ser  
                                     35                                      40                                      45  
 Ser Leu Glu Lys Asn His Arg Gln Thr Ala Phe Pro Ser Thr Ser Ser  
                                     50                                      55                                      60  
 Pro Thr Met Asn Gly Cys Leu Tyr Ile Phe Arg Gly Cys Ser Pro Thr  
 65                                      70                                      75                                      80  
 Pro Phe Pro Ser Pro Val Asp Phe Tyr Phe Tyr Phe Phe Gly Ile Glu  
                                     85                                      90                                      95  
 Ser Arg Ser Val Thr Glu Val Val Val Ser Arg Asp Arg  
                                     100                                      105

<210> 1763  
 <211> 356  
 <212> DNA  
 <213> Homo sapiens

<400> 1763



gcgcgccggg ggcgcgatgt ggagcgggca cttaccggtt tcatggccaa gacaggcgag  
 60  
 actcagagtc ttttcaaaga tgacgtcagc acatttccat tgattgctgc cagacctttc  
 120  
 accatcccct acctgacagc ttttcttccg tctgaactgg agatgcaaca aatggaagag  
 180  
 acagattcct cggagcagga tgaacagaca gacacagaga accttgctct tcatatcagc  
 240  
 atggaggatt ctggagccga gaaagagaac acctctgtcc tgcagcagaa cccctccttg  
 300  
 tcgggtagcc ggaatgggga ggagaacatc atcgataacc cttatctgcg accggt  
 356

<210> 1764

<211> 118

<212> PRT

<213> Homo sapiens

<400> 1764

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Arg | Arg | Gly | Arg | Asp | Val | Glu | Arg | Ala | Leu | Thr | Arg | Phe | Met | Ala |
| 1   |     |     | 5   |     |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Lys | Thr | Gly | Glu | Thr | Gln | Ser | Leu | Phe | Lys | Asp | Asp | Val | Ser | Thr | Phe |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Pro | Leu | Ile | Ala | Ala | Arg | Pro | Phe | Thr | Ile | Pro | Tyr | Leu | Thr | Ala | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Leu | Pro | Ser | Glu | Leu | Glu | Met | Gln | Gln | Met | Glu | Glu | Thr | Asp | Ser | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Glu | Gln | Asp | Glu | Gln | Thr | Asp | Thr | Glu | Asn | Leu | Ala | Leu | His | Ile | Ser |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |
| Met | Glu | Asp | Ser | Gly | Ala | Glu | Lys | Glu | Asn | Thr | Ser | Val | Leu | Gln | Gln |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Asn | Pro | Ser | Leu | Ser | Gly | Ser | Arg | Asn | Gly | Glu | Glu | Asn | Ile | Ile | Asp |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Asn | Pro | Tyr | Leu | Arg | Pro |     |     |     |     |     |     |     |     |     |     |
|     |     |     | 115 |     |     |     |     |     |     |     |     |     |     |     |     |

<210> 1765

<211> 357

<212> DNA

<213> Homo sapiens

<400> 1765

cgggcgcatt cttcgtgact ggcgtcccgc cgccggtgca aaagtgtcag gaaataccag  
 60  
 tcatgactat gtttagccgc acctctctgc agtatgcat cgttctggca gcgctgggag  
 120  
 gtgccggtct ggcgtctctgg gccatgtcga gtgcgacgga ggccaatcag gcggaaattg  
 180  
 cccaggccag gccaggcatt attgcggcgg cgcgcggtgt cgtggatgtc gagggcgggc  
 240  
 tgctgcggct ctccaccag cgcgacgggg tgattcagga tgtgccggtg aaggaaggac  
 300  
 agcgggtcaa agccggcgat atcctcgccg cgctcgacaa tcgccgcgaa ctgatcg  
 357

<210> 1766  
 <211> 98  
 <212> PRT  
 <213> Homo sapiens

<400> 1766  
 Met Thr Met Phe Ser Arg Thr Ser Leu Gln Tyr Ala Ile Val Leu Ala  
 1 5 10 15  
 Ala Leu Gly Gly Ala Gly Leu Ala Leu Trp Ala Met Ser Ser Ala Thr  
 20 25 30  
 Glu Ala Asn Gln Ala Glu Ile Ala Gln Ala Arg Pro Gly Ile Ile Ala  
 35 40 45  
 Ala Ala Arg Gly Val Val Asp Val Glu Gly Gly Leu Leu Arg Leu Ser  
 50 55 60  
 Thr Gln Arg Asp Gly Val Ile Gln Asp Val Pro Val Lys Glu Gly Gln  
 65 70 75 80  
 Arg Val Lys Ala Gly Asp Ile Leu Ala Ala Leu Asp Asn Arg Arg Glu  
 85 90 95  
 Leu Ile

<210> 1767  
 <211> 297  
 <212> DNA  
 <213> Homo sapiens

<400> 1767  
 nnnncgccgac ggccgcatg acgcaccgca ttgacgtgaa ccagggcgac gatgccaacc  
 60  
 ccggccaaca cgccaggctg cttgacgccg ccagccaacc cgacgaacgc cccaccaaga  
 120  
 acgagcccga gccatccccg gccaatcaac gccagacgta tggccacaac gaggcgacg  
 180  
 agggacaaac ccacctggag tccgtcgttg tgcattgcccc ccaccacgct caacgtcgtc  
 240  
 aatggacagc acaccgccag ccagagggca tgatccggat cggttccggc gtagcgn  
 297

<210> 1768  
 <211> 73  
 <212> PRT  
 <213> Homo sapiens

<400> 1768  
 Met Pro Thr Pro Ala Asn Thr Pro Gly Cys Leu Thr Pro Pro Ala Asn  
 1 5 10 15  
 Pro Thr Asn Ala Pro Pro Arg Thr Ser Pro Ser His Pro Arg Pro Ile  
 20 25 30  
 Asn Ala Arg Arg Met Ala Thr Thr Ser Ala Thr Arg Asp Lys Pro Thr  
 35 40 45  
 Trp Ser Pro Ser Leu Cys Met Pro Pro Thr Thr Leu Asn Val Val Asn  
 50 55 60  
 Gly Gln His Thr Ala Ser Gln Arg Ala

65

70

&lt;210&gt; 1769

&lt;211&gt; 474

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1769

caccatgctg gctcgggttcg acgcattcgg gtgggtgagt ctgttctcgt caccgacggg  
 60  
 caggggtcatg ccgttcgtgg ccctgccatt gaggtgacga aagggtcagt tagcgtcgag  
 120  
 accgttgaga tcctccatac tcccgcgacc acgcattcgt gggtcgccgt ccaggcattg  
 180  
 ccgaagtccg atagagctga gctggcggtg gcgaccctca ccgagatggg agttcacgaa  
 240  
 atcctcgctt ggcaggctga tcggagcatc gtgcgatgga agggcgacaa gcaagccaag  
 300  
 ggcgtcgaga ggtggcaagc ggctgcccgt gagggcacca aacagtctcg acgttttctt  
 360  
 gtgccacagg tagaactagc gcaaaccctg gaagttgtta agcggatttg caatgcccaag  
 420  
 gccgcctacg ttttgacaga gtcggccagt gaaccgctgg tgcattcagga gctc  
 474

&lt;210&gt; 1770

&lt;211&gt; 158

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1770

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | His | Ala | Gly | Ser | Val | Arg | Arg | Ile | Arg | Val | Gly | Glu | Ser | Val | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Val | Thr | Asp | Gly | Gln | Gly | His | Ala | Val | Arg | Gly | Pro | Ala | Ile | Glu | Val |
|     |     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |
| Thr | Lys | Gly | Ser | Val | Ser | Val | Glu | Thr | Val | Glu | Ile | Leu | His | Thr | Pro |
|     |     |     | 35  |     |     |     |     |     | 40  |     |     |     |     | 45  |     |
| Ala | Thr | Thr | His | Arg | Trp | Val | Ala | Val | Gln | Ala | Leu | Pro | Lys | Ser | Asp |
|     |     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |
| Arg | Ala | Glu | Leu | Ala | Val | Ala | Thr | Leu | Thr | Glu | Met | Gly | Val | His | Glu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Ile | Leu | Ala | Trp | Gln | Ala | Asp | Arg | Ser | Ile | Val | Arg | Trp | Lys | Gly | Asp |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |
| Lys | Gln | Ala | Lys | Gly | Val | Ala | Arg | Trp | Gln | Ala | Ala | Ala | Arg | Glu | Ala |
|     |     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |
| Thr | Lys | Gln | Ser | Arg | Arg | Phe | Leu | Val | Pro | Gln | Val | Glu | Leu | Ala | Gln |
|     |     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |
| Thr | Arg | Glu | Val | Val | Lys | Arg | Ile | Cys | Asn | Ala | Gln | Ala | Ala | Tyr | Val |
|     |     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |
| Leu | His | Glu | Ser | Ala | Ser | Glu | Pro | Leu | Val | His | Gln | Glu | Leu |     |     |
| 145 |     |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     |     |

&lt;210&gt; 1771

&lt;211&gt; 287

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1771

acgcgtgatg ggtaattcta atacatgcaa agaattatct ctgcaagtat actcagatat  
 60  
 taataacagc ggggtgtcgca gaggaagaag cctgggagaa tggaagtcag ggaaggagag  
 120  
 caacaggcctt ctcaactctgt gccatgagca tgtgctagcc atggagacac tctgcatgtt  
 180  
 acctagaact gctgattcat tgctctggaa ttattcagct attcaagacc cagtgaata  
 240  
 cagcaagcag ctttcattca tacacacaca tgtgcatcca tgtgcac  
 287

&lt;210&gt; 1772

&lt;211&gt; 93

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1772

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gly | Asn | Ser | Asn | Thr | Cys | Lys | Glu | Leu | Ser | Leu | Gln | Val | Tyr | Ser |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Asp | Ile | Asn | Asn | Ser | Gly | Cys | Arg | Arg | Gly | Arg | Ser | Leu | Gly | Glu | Trp |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |     |
| Lys | Ser | Gly | Lys | Glu | Ser | Asn | Arg | Leu | Leu | Thr | Leu | Cys | His | Glu | His |
|     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Val | Leu | Ala | Met | Glu | Thr | Leu | Cys | Met | Leu | Pro | Arg | Thr | Ala | Asp | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Leu | Leu | Trp | Asn | Tyr | Ser | Ala | Ile | Gln | Asp | Pro | Val | Lys | Tyr | Ser | Lys |
| 65  |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |     |
| Gln | Leu | Ser | Phe | Ile | His | Thr | His | Val | His | Pro | Cys | Ala |     |     |     |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     |     |     |

&lt;210&gt; 1773

&lt;211&gt; 393

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1773

accggtgagt tctacgtccc ggttaaccac ctcgagggtg aacaggcgca cctcgacgtc  
 60  
 ttcgattctc cgcttaacga gtacgcagcg atgggatttg agtacggcta ctctgttgcc  
 120  
 cgtccggatt ctctggtatt gtgggaagcc caattcggcg atttcaccaa cgggtgccag  
 180  
 acgatcatcg atgagttcat cgccctcggt ggctccaagt ggggtcagaa gtcgggagtc  
 240  
 gtgctgctgc tgccgcacgg ttacgaaggt caggggcctg atcactcgtc ggcccgtctg  
 300  
 gagcgcttcc tcaatctatg cagtgaagac gctttggccg tctgccagcc ctcgacccc  
 360  
 gcaagctaca gccatttatt gcgtcagcac gcg  
 393

<210> 1774  
 <211> 131  
 <212> PRT  
 <213> Homo sapiens

<400> 1774  
 Thr Gly Glu Phe Tyr Val Pro Val Asn His Leu Gly Gly Glu Gln Ala  
 1 5 10 15  
 His Leu Asp Val Phe Asp Ser Pro Leu Asn Glu Tyr Ala Ala Met Gly  
 20 25 30  
 Phe Glu Tyr Gly Tyr Ser Val Ala Arg Pro Asp Ser Leu Val Leu Trp  
 35 40 45  
 Glu Ala Gln Phe Gly Asp Phe Thr Asn Gly Ala Gln Thr Ile Ile Asp  
 50 55 60  
 Glu Phe Ile Ala Ser Ala Gly Ser Lys Trp Gly Gln Lys Ser Gly Val  
 65 70 75 80  
 Val Leu Leu Leu Pro His Gly Tyr Glu Gly Gln Gly Pro Asp His Ser  
 85 90 95  
 Ser Ala Arg Leu Glu Arg Phe Leu Asn Leu Cys Ser Glu Asp Ala Leu  
 100 105 110  
 Ala Val Cys Gln Pro Ser Thr Pro Ala Ser Tyr Ser His Leu Leu Arg  
 115 120 125  
 Gln His Ala  
 130

<210> 1775  
 <211> 369  
 <212> DNA  
 <213> Homo sapiens

<400> 1775  
 nncctccgag cagctctccg gggcagaccc cagctgcaag ccacagccc ggcctggtaa  
 60  
 cgggagggca tcgctaggga ggggtggggc ggcccggctt cgatgcagcc atgtgggagg  
 120  
 gccactctca gagaccccc gccttccttg ccacccccac ccagagggg aagctggagc  
 180  
 tgggaggctg cagaccagg ccaaggtgtg gccagggctg gctttcttg gaggtttga  
 240  
 gcatcctgct tcttggccac ccagctctgg ggctgctgtc aactcttgat ttgtagacat  
 300  
 cactccagcc tctggcctgt caccctgaac ctccccatg tctgtgtctt ttctcactgg  
 360  
 aacaccggt  
 369

<210> 1776  
 <211> 59  
 <212> PRT  
 <213> Homo sapiens

<400> 1776  
 Arg Glu Gly Ile Ala Arg Glu Gly Trp Gly Gly Pro Ala Ser Met Gln

```

      1             5             10             15
Pro Cys Gly Arg Ala Thr Leu Arg Asp Pro Pro Pro Ser Leu Pro Pro
      20             25             30
Pro Pro Gln Arg Gly Ser Trp Ser Trp Glu Ala Ala Asp Pro Gly Gln
      35             40             45
Gly Val Ala Arg Ala Gly Phe Leu Gly Arg Leu
      50             55

```

<210> 1777  
 <211> 370  
 <212> DNA  
 <213> Homo sapiens

```

<400> 1777
agcttcttat cactatcctt tagtgctttt tggctacct tagcggtaat gctccatcaa
60
gaatatgggtt ttggtagtgc aactgcggga ttttttggcc tcgctggtgc cgccggagct
120
ttagcagcac cactgtccgg taaactaaca gataaacaag gaccgacacg ggtcacgcag
180
ctgggtgctg ccttagttgt cgtctctttc gcattctatgt tgttattgcc ttacttcagt
240
atcagtaccc aagttataat gattattgtt gctaccatag tgtttgactt tgggtgttcag
300
gcggcactta ttgctcatca aaccttagtg tataacattg actctaccgc tcgtggacgc
360
cttaacgcgt
370

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<210> 1778  
 <211> 123  
 <212> PRT  
 <213> Homo sapiens

```

<400> 1778
Ser Phe Leu Ser Leu Ser Phe Ser Ala Phe Trp Ser Thr Leu Ala Val
  1             5             10             15
Met Leu His Gln Glu Tyr Gly Phe Gly Ser Ala Thr Ala Gly Phe Phe
      20             25             30
Gly Leu Ala Gly Ala Ala Gly Ala Leu Ala Ala Pro Leu Ser Gly Lys
      35             40             45
Leu Thr Asp Lys Gln Gly Pro Thr Arg Val Thr Gln Leu Gly Ala Ala
      50             55             60
Leu Val Val Val Ser Phe Ala Ser Met Leu Leu Leu Pro Tyr Phe Ser
      65             70             75             80
Ile Ser Thr Gln Val Ile Met Ile Ile Val Ala Thr Ile Val Phe Asp
      85             90             95
Phe Gly Val Gln Ala Ala Leu Ile Ala His Gln Thr Leu Val Tyr Asn
      100            105            110
Ile Asp Ser Thr Ala Arg Gly Arg Leu Asn Ala
      115            120

```

<210> 1779  
 <211> 345

<212> DNA

<213> Homo sapiens

<400> 1779

ccatgtgtgt gtatatgttc gtgtgtgatg gtatgtatat gtgtatatgt gnnatatgt  
60  
atacacgtgt gttatgggtg gtatatatgt atatacgtgt gtgtatatat atgtatatgg  
120  
gtatgtgtgt gcatgtgcgt atgggtgtgt atatgtgtat atatgtaggt gtgtatatct  
180  
gggaatatat ggggtgtgat atgtgtgtat aggtttttat atgtggggaa atatttaaac  
240  
ctgtgtatat tggaatgtgt gtgtatatgt gtgtatatat ggnggtgtgt atgtacatgt  
300  
atgtgtgtat atatgtgtgt atatacgtag gtgtgcatat gtgtg  
345

<210> 1780

<211> 55

<212> PRT

<213> Homo sapiens

<400> 1780

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Cys | Val | Cys | Ile | Cys | Ser | Cys | Val | Met | Val | Cys | Ile | Cys | Val | Tyr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     | 15  |     |     |
| Val | Xaa | Ile | Cys | Ile | His | Val | Cys | Tyr | Gly | Val | Tyr | Ile | Cys | Ile | Tyr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     | 30  |     |     |     |
| Val | Cys | Val | Tyr | Ile | Cys | Ile | Trp | Val | Cys | Val | Cys | Met | Cys | Val | Trp |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Val | Cys | Ile | Cys | Val | Tyr | Met |     |     |     |     |     |     |     |     |     |
|     | 50  |     |     |     |     | 55  |     |     |     |     |     |     |     |     |     |

<210> 1781

<211> 349

<212> DNA

<213> Homo sapiens

<400> 1781

nacgcgtcat gctaaatddd gccctttatg gcaacatddd cgtcagaaca agcgggaagag  
60  
aagctactat ccaagtttca tacgccggtt aaaagaaaac atgatgatac gagatcatct  
120  
gatgtgaaca caacgcaaac tggttcaagc gccacgcca ttacacctgt acccttactg  
180  
cccagtgac aagagcccag ttatctttgc cagtgggtgcg ctccccagac acgaaagcac  
240  
aagacatggg agggatgatgc tattcttata ttgcatggaa ataaaactac ttgttcgcta  
300  
cgatccgcac atgatggcag catgctagtg acgaatgctg ccttccgga  
349

<210> 1782

<211> 107

<212> PRT

<213> Homo sapiens

<400> 1782

```

Met Ala Thr Phe Ser Ser Glu Gln Ala Glu Glu Lys Leu Leu Ser Lys
 1           5           10           15
Phe His Thr Pro Val Lys Arg Lys His Asp Asp Thr Arg Ser Ser Asp
      20           25           30
Val Asn Thr Thr Gln Thr Gly Ser Ser Ala Thr Pro Ile Thr Pro Val
      35           40           45
Pro Leu Leu Pro Ser Ala Gln Glu Pro Ser Tyr Leu Cys Gln Trp Cys
      50           55           60
Ala Pro Gln Thr Arg Lys His Lys Thr Trp Glu Gly Asp Ala Ile Leu
65           70           75           80
Ile Leu His Gly Asn Lys Thr Thr Cys Ser Leu Arg Ser Ala His Asp
      85           90           95
Gly Ser Met Leu Val Thr Asn Ala Ala Phe Arg
      100           105

```

<210> 1783

<211> 1829

<212> DNA

<213> Homo sapiens

<400> 1783

```

gtgcacgact tcgacgccag cctctcgggc atcgggcagg aactggg'gcg cggcgcttac
60
agcatgagtg atgtcttggc attgccatt ttcaagcagg aagattccag ccttccattg
120
gatggtgaaa cagagcacc accctttcag tatgtgatgt gtgctgcaac gtcaccagca
180
gtaaaactgc atgatgaaac gcttacttat ttgaaccaag gtcagtcata tgaaattcgg
240
atgctggata atcggaatat gggatgatg cctgagatca atggaaaatt agtaaagagc
300
atcataaggg ttgtattcca tgacagacgg ctacaatata cagagcatca gcaacttgaa
360
ggatggaagt ggaatcgccc aggagacaga cttcttgatt tagatattcc aatgtctgtg
420
ggaataattg acacaaggac gaatccaggc cagttaaatt cggttgaatt tctgtgggac
480
ccagcaaaac gcacctctgc tttcattcag gtacactgca tcagcacaga atttactcca
540
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720
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780
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900

```



gccccacag cctatgtgaa taacagccct tccccagcgc ccactttcac ctccccacag  
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 cagagcaactt gcagtgtccc agacagcaat tcttcttccc caaatcatca gggagatgga  
 1020  
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 1080  
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 1140  
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 1200  
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 1260  
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 1320  
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 1380  
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 1440  
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 1500  
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 1620  
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 1680  
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 1740  
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 1829

<210> 1784

<211> 514

<212> PRT

<213> Homo sapiens

<400> 1784

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | His | Asp | Phe | Asp | Ala | Ser | Leu | Ser | Gly | Ile | Gly | Gln | Glu | Leu | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ala | Gly | Ala | Tyr | Ser | Met | Ser | Asp | Val | Leu | Ala | Leu | Pro | Ile | Phe | Lys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gln | Glu | Asp | Ser | Ser | Leu | Pro | Leu | Asp | Gly | Glu | Thr | Glu | His | Pro | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Phe | Gln | Tyr | Val | Met | Cys | Ala | Ala | Thr | Ser | Pro | Ala | Val | Lys | Leu | His |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Asp | Glu | Thr | Leu | Thr | Tyr | Leu | Asn | Gln | Gly | Gln | Ser | Tyr | Glu | Ile | Arg |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     | 80  |     |     |
| Met | Leu | Asp | Asn | Arg | Lys | Met | Gly | Asp | Met | Pro | Glu | Ile | Asn | Gly | Lys |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Leu | Val | Lys | Ser | Ile | Ile | Arg | Val | Val | Phe | His | Asp | Arg | Arg | Leu | Gln |
|     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |     |
| Tyr | Thr | Glu | His | Gln | Gln | Leu | Glu | Gly | Trp | Lys | Trp | Asn | Arg | Pro | Gly |

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      115      120      125
Asp Arg Leu Leu Asp Leu Asp Ile Pro Met Ser Val Gly Ile Ile Asp
      130      135      140
Thr Arg Thr Asn Pro Gly Gln Leu Asn Ala Val Glu Phe Leu Trp Asp
145      150      155      160
Pro Ala Lys Arg Thr Ser Ala Phe Ile Gln Val His Cys Ile Ser Thr
      165      170      175
Glu Phe Thr Pro Arg Lys His Gly Gly Glu Lys Gly Val Pro Phe Arg
      180      185      190
Ile Gln Val Asp Thr Phe Lys Gln Asn Glu Asn Gly Glu Tyr Thr Asp
      195      200      205
His Leu His Ser Ala Ser Cys Gln Ile Lys Val Phe Lys Pro Lys Gly
      210      215      220
Ala Asp Arg Lys Gln Lys Thr Asp Arg Glu Lys Met Glu Lys Arg Thr
225      230      235      240
Ala His Glu Lys Glu Lys Tyr Gln Pro Ser Tyr Asp Thr Thr Ile Leu
      245      250      255
Thr Glu Met Arg Leu Glu Pro Ile Ile Glu Asp Ala Val Glu His Glu
      260      265      270
Gln Lys Xaa Val Gln Gln Ala Asp Phe Ala Ala Asp Tyr Gly Asp Ser
      275      280      285
Leu Ala Lys Arg Gly Ser Cys Ser Pro Trp Pro Asp Ala Pro Thr Ala
      290      295      300
Tyr Val Asn Asn Ser Pro Ser Pro Ala Pro Thr Phe Thr Ser Pro Gln
305      310      315      320
Gln Ser Thr Cys Ser Val Pro Asp Ser Asn Ser Ser Ser Pro Asn His
      325      330      335
Gln Gly Asp Gly Ala Ser Gln Thr Ser Gly Glu Gln Ile Gln Pro Ser
      340      345      350
Ala Thr Ile Gln Glu Thr Gln Gln Trp Leu Leu Lys Asn Arg Phe Ser
      355      360      365
Ser Tyr Thr Arg Leu Phe Ser Asn Phe Ser Gly Ala Asp Leu Leu Lys
      370      375      380
Leu Thr Lys Glu Asp Leu Val Gln Ile Cys Gly Ala Ala Asp Gly Ile
385      390      395      400
Arg Leu Tyr Asn Ser Leu Lys Ser Arg Ser Val Arg Pro Arg Leu Thr
      405      410      415
Ile Tyr Val Cys Arg Glu Gln Pro Ser Ser Thr Val Leu Gln Gly Gln
      420      425      430
Gln Gln Ala Ala Ser Ser Ala Ser Glu Asn Gly Ser Gly Ala Pro Tyr
      435      440      445
Val Tyr His Ala Ile Tyr Leu Glu Glu Met Ile Ala Ser Glu Val Ala
      450      455      460
Arg Lys Leu Ala Leu Val Phe Asn Ile Pro Leu His Gln Ile Asn Gln
465      470      475      480
Val Tyr Arg Gln Gly Pro Thr Gly Ile His Ile Leu Val Ser Asp Gln
      485      490      495
Val Asn Gln Ile Ile Cys Phe Ser Phe Ser Asp Trp Tyr Leu Leu Leu
      500      505      510
Tyr Met

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&lt;210&gt; 1785

&lt;211&gt; 381

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1785

atcacggacg cagaggagaa agggctgatt actccaggcg tgagtgttct gattgaacca  
60  
actagcggca acacaggcat tggactggcc tttatggctg ctgccaaggg ctacaaactt  
120  
acactcacia tgctgcctc catgagcatg gagaggagga tcatattgaa ggcttttggg  
180  
gctgaacttg tccttactga cccactcttg ggaatgaaag gagctgtcaa gaaagcggaa  
240  
gagatacaag caaagacacc caactcgtac atccttcaac aatttgaaaa tccagctaac  
300  
ccaaagattc actatgagac tactgggcct gaaatctgga aagctacagc aggaaaaatt  
360  
gatggccttg tatctggtat c  
381

&lt;210&gt; 1786

&lt;211&gt; 127

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1786

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Thr | Asp | Ala | Glu | Glu | Lys | Gly | Leu | Ile | Thr | Pro | Gly | Val | Ser | Val |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Leu | Ile | Glu | Pro | Thr | Ser | Gly | Asn | Thr | Gly | Ile | Gly | Leu | Ala | Phe | Met |
|     |     |     | 20  |     |     |     | 25  |     |     |     |     | 30  |     |     |     |
| Ala | Ala | Ala | Lys | Gly | Tyr | Lys | Leu | Thr | Leu | Thr | Met | Pro | Ala | Ser | Met |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Ser | Met | Glu | Arg | Arg | Ile | Ile | Leu | Lys | Ala | Phe | Gly | Ala | Glu | Leu | Val |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Leu | Thr | Asp | Pro | Leu | Leu | Gly | Met | Lys | Gly | Ala | Val | Lys | Lys | Ala | Glu |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Glu | Ile | Gln | Ala | Lys | Thr | Pro | Asn | Ser | Tyr | Ile | Leu | Gln | Gln | Phe | Glu |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Asn | Pro | Ala | Asn | Pro | Lys | Ile | His | Tyr | Glu | Thr | Thr | Gly | Pro | Glu | Ile |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Trp | Lys | Ala | Thr | Ala | Gly | Lys | Ile | Asp | Gly | Leu | Val | Ser | Gly | Ile |     |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

&lt;210&gt; 1787

&lt;211&gt; 294

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1787

gtgcacacag caattcaata tgccaagaca ccagggttgca gcagagaaag atttaattgt  
60  
agggtcacct aacaaggaga tgagaacaaa ctttaaactct atctctctaa ggaatttgga  
120  
cttcgggttt ttaagggtta gaatgggcca aaacatggac attattgatt ggtcaaagag  
180

tacaggggtca tggaacctgg agatgaaaaa gccatattct catgctgac ctgttcctct  
 240  
 gtggaagggtc ttcaaattgg ttgccggaat aaaagatctg tcaaacatct tagg  
 294

<210> 1788  
 <211> 91  
 <212> PRT  
 <213> Homo sapiens

<400> 1788  
 Met Pro Arg His Gln Val Ala Ala Glu Lys Asp Leu Ile Val Gly Ser  
 1 5 10 15  
 Pro Asn Lys Glu Met Arg Thr Asn Phe Lys Ser Ile Ser Leu Arg Asn  
 20 25 30  
 Leu Asp Phe Gly Phe Leu Arg Phe Arg Met Gly Gln Asn Met Asp Ile  
 35 40 45  
 Ile Asp Trp Ser Lys Ser Thr Gly Ser Trp Asn Leu Glu Met Lys Lys  
 50 55 60  
 Pro Tyr Ser His Ala Asp Pro Val Pro Leu Trp Lys Val Phe Lys Leu  
 65 70 75 80  
 Val Ala Gly Ile Lys Asp Leu Ser Asn Ile Leu  
 85 90

<210> 1789  
 <211> 353  
 <212> DNA  
 <213> Homo sapiens

<400> 1789  
 ttccacacata caccacacgcg gcatgtcctg acagagatgc acaccctag cacatattca  
 60  
 cacacacaga catgccacac cccgccatcc cccacactc gtacacgccc accaccctc  
 120  
 gcaggcacac atgcacacac ggcgcgcac acgcacacac acccccagcc cggaccggcc  
 180  
 gacctgctcc cgggggtctc tcccgcaggc aggtctcctc gccgagtctc cgaaaagggg  
 240  
 cggtcgtggc ggccctggcg cccagctggg caacgcttcg tggatatca ccgttctct  
 300  
 ctgttggtgcc cagcgccccg actgaagatc cggatcttca gtcctggcg cgc  
 353

<210> 1790  
 <211> 105  
 <212> PRT  
 <213> Homo sapiens

<400> 1790  
 Met His Thr Pro Ser Thr Tyr Ser His Thr Gln Thr Cys His Thr Pro  
 1 5 10 15  
 Pro Ser Pro His Thr Arg Thr Arg Pro Pro Pro Leu Ala Gly Thr His  
 20 25 30  
 Ala His Thr Arg Ala His Thr His Thr His Pro Gln Pro Gly Pro Ala

```

      35              40              45
Asp Leu Leu Pro Gly Val Ser Pro Ala Gly Arg Ser Pro Arg Arg Val
      50              55              60
Ser Glu Lys Gly Arg Ser Trp Arg Pro Trp Arg Pro Ala Gly Gln Arg
65              70              75              80
Phe Val Val Ser His Arg Phe Ser Leu Leu Cys Pro Ala Pro Arg Leu
      85              90              95
Lys Ile Arg Ile Phe Ser Pro Trp Arg
      100              105

```

<210> 1791  
 <211> 355  
 <212> DNA  
 <213> Homo sapiens

```

<400> 1791
aaatttcagt tagagattag ggaaaataaa gatgttattt tttcccatcc tagtttacag
60
accccccaga aaccactca tggattctcc cgagtctttg gacctggctc agacaccctt
120
gctttggatc aagccaatgc atgtatcccc taacacaccc atgctttatg tggtccttgc
180
ccctccctgc tcaggggact gcttggttaac ttcattgggt tggggacata tatattatag
240
gagagagaca gagaaaaaga aagagaggaa atgttattct ccttgtctgt atctgtatct
300
ccactccgat tcccatcccc tctgtgctc tcctctctct cctcccttca cgcgt
355

```

<210> 1792  
 <211> 108  
 <212> PRT  
 <213> Homo sapiens

```

<400> 1792
Met Leu Phe Phe Pro Ile Leu Val Tyr Arg Pro Pro Arg Asn Pro Leu
1              5              10              15
Met Asp Ser Pro Glu Ser Leu Asp Leu Ala Gln Thr Pro Leu Leu Trp
      20              25              30
Ile Lys Pro Met His Val Ser Pro Asn Thr Pro Met Leu Tyr Val Val
      35              40              45
Pro Ala Pro Pro Cys Ser Gly Asp Cys Leu Leu Thr Ser Leu Gly Trp
      50              55              60
Gly His Ile Tyr Tyr Arg Arg Glu Thr Glu Lys Lys Lys Glu Arg Lys
65              70              75              80
Cys Tyr Ser Pro Cys Leu Tyr Leu Tyr Leu His Ser Asp Ser His Ser
      85              90              95
Leu Cys Cys Ser Pro Leu Ser Pro Pro Phe Thr Arg
      100              105

```

<210> 1793  
 <211> 510  
 <212> DNA  
 <213> Homo sapiens

&lt;400&gt; 1793

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 caccctctcg gagctcctcg cttaccagtc gcccaaagag cttgtcccc cagcagccag  
 120  
 agtcagccag acccttagca aacaccatag gggatcatctc aatctcttct ccaacttcac  
 180  
 cttcttctct ggagatgaat cctgacaaca cctcagggct gaggcagaag tcggtggagg  
 240  
 ccgagccgtg ctcatgttg atggtgcacc gatacacacc gcagtctacg ggggaggcct  
 300  
 gcacgatggc caaggccgcc ggccctcat cccctgcgct cctgccacc tcgccactg  
 360  
 ggcgtgatc cttggcccat gtcaagactg agtcactaag aatgttgaaa aactggcacc  
 420  
 acagcttcag gctaccggag gcatcaggaa actgctccac ccgaatcttc cggatcacct  
 480  
 gtggggcttt cagcaggtct ttggctttcc  
 510

&lt;210&gt; 1794

&lt;211&gt; 116

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1794

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Thr | Leu | Ala | Trp | Glu | Ala | Phe | Arg | Arg | Pro | His | Pro | Tyr | Pro | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Pro | Arg | Ser | Ser | Ser | Leu | Thr | Ser | Arg | Pro | Lys | Ser | Leu | Ser | Pro | Gln |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     | 30  |     |     |     |
| Gln | Pro | Glu | Ser | Ala | Arg | Pro | Leu | Ala | Asn | Thr | Ile | Gly | Val | Ile | Ser |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ile | Ser | Ser | Pro | Thr | Ser | Pro | Ser | Ser | Leu | Glu | Met | Asn | Pro | Asp | Asn |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Thr | Ser | Gly | Leu | Arg | Gln | Lys | Ser | Val | Glu | Ala | Glu | Pro | Cys | Ser | Leu |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     |     | 80  |
| Trp | Met | Val | His | Arg | Tyr | Thr | Pro | Gln | Ser | Thr | Gly | Glu | Ala | Cys | Thr |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Met | Ala | Lys | Ala | Ala | Gly | Pro | Ser | Ser | Pro | Ala | Leu | Leu | Pro | Thr | Ser |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Pro | Thr | Gly | Arg |     |     |     |     |     |     |     |     |     |     |     |     |
|     |     | 115 |     |     |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 1795

&lt;211&gt; 386

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1795

ctatgctctg agtcacttct ccaagcattc ctttctgttc ttccttccct gggctgatca  
 60  
 tttcaagaag tcctacattc cagaaaactt gagaggtgct tcttctctgg aagccctttt  
 120

tcttttctgt gagtcaggg agcattctac atacctcagc tgtgtctgct atcttttgc  
 180  
 taattatcaa tctttccata taaacagtaa aggaccacag tttattcatc agattcccca  
 240  
 tccaaacctg cacctgcata cataaacgca ctggataaat gtaccgcagt agacagaggg  
 300  
 tctccagggt gagagctcca tgagggcacc aatttttgtc tgtttagctg tgcctcaaa  
 360  
 gcaaggaagg gttgatccgg tctaga  
 386

<210> 1796

<211> 86

<212> PRT

<213> Homo sapiens

<400> 1796

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gln | Val | Gln | Val | Trp | Met | Gly | Asn | Leu | Met | Asn | Lys | Leu | Trp | Ser |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Phe | Thr | Val | Tyr | Met | Glu | Arg | Leu | Ile | Ile | Lys | Gln | Lys | Ile | Ala | Asp |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |     |
| Thr | Ala | Glu | Val | Cys | Arg | Met | Leu | Pro | Glu | Leu | Thr | Glu | Lys | Lys | Arg |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Gly | Phe | Gln | Arg | Arg | Ser | Thr | Ser | Gln | Val | Phe | Trp | Asn | Val | Gly | Leu |
|     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |
| Leu | Glu | Met | Ile | Ser | Pro | Gly | Lys | Glu | Glu | Gln | Lys | Gly | Met | Leu | Gly |
| 65  |     |     |     | 70  |     |     |     | 75  |     |     |     |     |     | 80  |     |
| Glu | Val | Thr | Gln | Ser | Ile |     |     |     |     |     |     |     |     |     |     |
|     |     |     |     | 85  |     |     |     |     |     |     |     |     |     |     |     |

<210> 1797

<211> 348

<212> DNA

<213> Homo sapiens

<400> 1797

aagcttcact atgttgccca ttccatgggc ggcgtgctgg tgcgtgacct gctggcggac  
 60  
 cggaatttgc cgatgtcatt gatcaggcca tctgtctggg ctgcccgcag cagggtcgc  
 120  
 gtgccgctaa tttgttggcg ccatttgctg ggcgcgcac cgtcaaattg tgtatcacag  
 180  
 cgactatgtg atgccgcttg cgcccacgcc cggcagcgcg cgttggagcg ccatcaactc  
 240  
 acagatggac aacctggtgt tgccggtgac ctgggcaatt ttaccgggaa tgacccatgt  
 300  
 ggcgggtgat tacctggggc attgttcggt attgtacagc ccacgcgt  
 348

<210> 1798

<211> 108

<212> PRT

<213> Homo sapiens

&lt;400&gt; 1798

```

Met Gly Gly Val Leu Val Arg Asp Leu Leu Ala Asp Arg Asn Leu Pro
 1           5           10           15
Met Ser Leu Ile Arg Ser Ser Val Trp Ala Arg Arg Ser Arg Ala Arg
          20           25           30
Val Pro Leu Ile Cys Trp Arg His Leu Leu Ala Ala His Pro Ser Asn
          35           40           45
Gly Val Ser Gln Arg Leu Cys Asp Ala Ala Cys Ala His Ala Arg Gln
          50           55           60
Arg Ala Leu Glu Arg His Gln Leu Thr Asp Gly Gln Pro Gly Val Ala
65           70           75           80
Gly Asp Leu Gly Asn Phe Thr Gly Asn Asp Pro Cys Gly Gly Gly Leu
          85           90           95
Pro Gly Ala Leu Phe Val Ile Val Gln Pro Thr Arg
          100          105

```

&lt;210&gt; 1799

&lt;211&gt; 366

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1799

```

acgcgctgcgc tcctgctggt cgggattttc cttgctgtag ttaaccaaac caccggcgctc
60
aataccgtca tgtattacgc gcccaagggtg ttggagttcg caggaatgag caccagggcg
120
tcgattattt cagaggtggc taatggagtc atgtctgtta ttggtgccgc tgcaggcttg
180
tggtcatcgc aacgggttga tcgtcgtcac ctgcttatct tcgatgtcac ggcggtcggt
240
gtgtgtctcc ttggtattgc ggctactttc gggctggcaa ttgctcctca tgtgggtcaa
300
gggggtaccga agtgggcgcc tattctcgtg ctgcctccta tgagtatctt catgcttacc
360
gtgcac
366

```

&lt;210&gt; 1800

&lt;211&gt; 122

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1800

```

Thr Arg Arg Leu Leu Leu Val Gly Ile Phe Leu Ala Val Val Asn Gln
 1           5           10           15
Thr Thr Gly Val Asn Thr Val Met Tyr Tyr Ala Pro Lys Val Leu Glu
          20           25           30
Phe Ala Gly Met Ser Thr Gln Ala Ser Ile Ile Ser Glu Val Ala Asn
          35           40           45
Gly Val Met Ser Val Ile Gly Ala Ala Ala Gly Leu Trp Leu Ile Glu
          50           55           60
Arg Phe Asp Arg Arg His Leu Leu Ile Phe Asp Val Thr Ala Val Gly
65           70           75           80
Val Cys Leu Leu Gly Ile Ala Ala Thr Phe Gly Leu Ala Ile Ala Pro

```



85 90 95  
 His Val Gly Gln Gly Val Pro Lys Trp Ala Pro Ile Leu Val Leu Val  
 100 105 110  
 Leu Met Ser Ile Phe Met Leu Ile Val His  
 115 120

<210> 1801  
 <211> 597  
 <212> DNA  
 <213> Homo sapiens

<400> 1801  
 aattttctcct tcggtgacta cttcaagaac gaggccattc agtacgcatg ggagctcgtc  
 60  
 actaagccgg cagaacaggg cggattgggt ttcgatcctg ccagcatctg ggtgacggtc  
 120  
 cttggacctg ggtttcaccc tgactatccg gagggcgaca ttgaggcgcg cgaggcgtgg  
 180  
 cgtgctgcgg gtatccctga cgagcagatt cagggtcgct cccttaagga caactactgg  
 240  
 catatggggg ttcccgggcc cggcgggccc tgctcggaaa tctacatcga tcgtggccca  
 300  
 gcctatggtc ccgacgggtg tccagaagca gatgaggacc gttaccttga gatctggaac  
 360  
 ctctgtattcg agaccgagga tctctcagcg gtgcgcgcta aagatgactt cgacatcgca  
 420  
 ggcccattgc gcagccttaa catcgacact ggtgccggtc tcgaacgtat tgcctaccta  
 480  
 ctccagggcg tcgacaatat gtacgagact gaccaggtat tccctgtcat tgagaaagcg  
 540  
 tccgagatgt cgggcaagcg gtacggcggt cgccacgacg acgacgtccg actacgc  
 597

<210> 1802  
 <211> 199  
 <212> PRT  
 <213> Homo sapiens

<400> 1802  
 Asn Phe Ser Phe Gly Asp Tyr Phe Lys Asn Glu Ala Ile Gln Tyr Ala  
 1 5 10 15  
 Trp Glu Leu Val Thr Lys Pro Ala Glu Gln Gly Gly Leu Gly Phe Asp  
 20 25 30  
 Pro Ala Ser Ile Trp Val Thr Val Leu Gly Pro Gly Phe His Pro Asp  
 35 40 45  
 Tyr Pro Glu Gly Asp Ile Glu Ala Arg Glu Ala Trp Arg Ala Ala Gly  
 50 55 60  
 Ile Pro Asp Glu Gln Ile Gln Gly Arg Ser Leu Lys Asp Asn Tyr Trp  
 65 70 75 80  
 His Met Gly Val Pro Gly Pro Gly Gly Pro Cys Ser Glu Ile Tyr Ile  
 85 90 95  
 Asp Arg Gly Pro Ala Tyr Gly Pro Asp Gly Gly Pro Glu Ala Asp Glu  
 100 105 110  
 Asp Arg Tyr Leu Glu Ile Trp Asn Leu Val Phe Glu Thr Glu Asp Leu

```

      115      120      125
Ser Ala Val Arg Ala Lys Asp Asp Phe Asp Ile Ala Gly Pro Leu Arg
      130      135      140
Ser Leu Asn Ile Asp Thr Gly Ala Gly Leu Glu Arg Ile Ala Tyr Leu
145      150      155      160
Leu Gln Gly Val Asp Asn Met Tyr Glu Thr Asp Gln Val Phe Pro Val
      165      170      175
Ile Glu Lys Ala Ser Glu Met Ser Gly Lys Arg Tyr Gly Val Arg His
      180      185      190
Asp Asp Asp Val Arg Leu Arg
      195

```

<210> 1803  
 <211> 708  
 <212> DNA  
 <213> Homo sapiens

```

<400> 1803
cccacaacga tggccgtcat ggtggatggg gaagtgcctg aggaggtcac acctaaggac
60
ctcatcctgg cctcatctc cgagatcggc accggtgggg gacaaggcca tatggtcgag
120
tatcgcgggc aggccatcga gaagatgtcg atggagggtc gcatgacgat ctgcaatatg
180
tcgattgagt ggggagctcg cgtcgcatg gttgcttctg atgagaccac cttcacctac
240
ctcaaggatc gtccgcacgc tccgcgtggt gcacagtggg acaaggctgt cgcgtactgg
300
cgcactctgc gtactgacga cgatgcgacc tttgacgctg agatccatgt ggacgcctcg
360
aatctcgccc ccttcgttac ctgggggtacc aaccgggggc agggatcccc ctaggcggt
420
gtggtgcccg ccgtcgaaga ctttgaggac gaggtagctc gcagcgcagc gtttgaggta
480
catggatttg acccgcacga gatcggttcc cggtttgctg acatctttcg caataactct
540
gcgaacaacg gcttggtact ggctcaggtt gatcccaagg tcgtcggaga gttgtgggac
600
tttgccgagc agcatcctgg tgagcagctc accctctccc tcgagaatcg gacgattaac
660
cttcggggtc gcacgaccta cccgttccat attgatgacg tcacgcgt
708

```

<210> 1804  
 <211> 236  
 <212> PRT  
 <213> Homo sapiens

```

<400> 1804
Pro Thr Thr Met Ala Val Met Val Asp Gly Glu Val Pro Glu Glu Val
1      5      10      15
Thr Pro Lys Asp Leu Ile Leu Ala Leu Ile Ser Glu Ile Gly Thr Gly
      20      25      30
Gly Gly Gln Gly His Met Val Glu Tyr Arg Gly Glu Ala Ile Glu Lys

```

1404

ctggaagggtt cgatcgccgt cgctggatcg ctggtacagt ggctgcgcga caacctcaag  
 720  
 atgttcgaga ccgccccgca aatcgaagcc ctgcgaaca ccgtcgagga caatgggtggc  
 780  
 gectactttg tgccggcctt ctctggcctg ttgcgcgcgt actggcgctcc gga  
 833

<210> 1806  
 <211> 277  
 <212> PRT  
 <213> Homo sapiens

<400> 1806  
 Xaa Ala Val Val Trp Asp Lys Asn Thr Gly Glu Pro Val Tyr Asn Ala  
 1 5 10 15  
 Ile Val Trp Gln Asp Thr Arg Thr Gln Lys Ile Cys Asn Glu Leu Ala  
 20 25 30  
 Gly Asp Lys Gly Ala Asp Arg Tyr Lys Glu Ile Cys Gly Leu Gly Leu  
 35 40 45  
 Ser Thr Tyr Phe Ser Gly Pro Lys Val Lys Trp Ile Leu Asp Asn Val  
 50 55 60  
 Glu Gly Ala Arg Ala Arg Ala Glu Ala Gly Asp Leu Leu Phe Gly Asn  
 65 70 75 80  
 Met Asp Thr Trp Val Leu Trp Asn Leu Thr Gly Gly Thr Asn Gly Gly  
 85 90 95  
 Val His Ile Thr Asp Pro Thr Asn Ala Ser Arg Thr Met Leu Met Asp  
 100 105 110  
 Val Arg Lys Leu Gln Trp Asp Asp Ser Met Cys Glu Val Met Gly Ile  
 115 120 125  
 Pro Lys Ser Met Leu Pro Glu Ile Lys Ser Ser Ser Glu Ile Tyr Gly  
 130 135 140  
 Tyr Gly Arg Lys Asn Gly Leu Leu Ile Asp Thr Pro Ile Ser Gly Ile  
 145 150 155 160  
 Leu Gly Asp Gln Gln Ala Ala Thr Phe Gly Gln Ala Cys Phe Gln Lys  
 165 170 175  
 Gly Met Ala Lys Asn Thr Tyr Gly Thr Gly Cys Phe Met Leu Met Asn  
 180 185 190  
 Thr Gly Glu Glu Ala Ile Phe Ser Glu Asn Gly Leu Leu Thr Thr Val  
 195 200 205  
 Cys Tyr Lys Ile Gly Asp Gln Pro Thr Val Tyr Ala Leu Glu Gly Ser  
 210 215 220  
 Ile Ala Val Ala Gly Ser Leu Val Gln Trp Leu Arg Asp Asn Leu Lys  
 225 230 235 240  
 Met Phe Glu Thr Ala Pro Gln Ile Glu Ala Leu Ala Asn Thr Val Glu  
 245 250 255  
 Asp Asn Gly Gly Ala Tyr Phe Val Pro Ala Phe Ser Gly Leu Phe Ala  
 260 265 270  
 Pro Tyr Trp Arg Pro  
 275

<210> 1807  
 <211> 420  
 <212> DNA  
 <213> Homo sapiens

&lt;400&gt; 1807

nnntatcggc aaggtggctg aaatggctct tgactatgtc aacggtgaca cgtgcgccgc  
 60  
 gaccgccccca ttcatctgtc gtttgacgtc gacgcgatgg accctagcgt ggccccgagc  
 120  
 acaggcacac cggcgcgtgg tggcttcaca ttccgagaag gccactacat atgcgaggcg  
 180  
 gtagctgaga ccggctcgtt ggtggctatg gatatggtag aagtcaaccc ccattctttaa  
 240  
 aagcatgcgg ctgagcagac gatcgccgtg ggttggtccc tcattcgttc ggcgctgggg  
 300  
 gagacgcttc tgtaatgggt gcatgatggg ccggtgggtcc atagccatgc atagacactc  
 360  
 cgggcgctga tatgatgagt gacatagcac gtacgataaa tctcgggttt gagcacgcgt  
 420

&lt;210&gt; 1808

&lt;211&gt; 88

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1808

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Val | Arg | Arg | Asp | Arg | Pro | Ile | His | Leu | Ser | Phe | Asp | Val | Asp | Ala |
| 1   |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Met | Asp | Pro | Ser | Val | Ala | Pro | Ser | Thr | Gly | Thr | Pro | Val | Arg | Gly | Gly |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |     |
| Leu | Thr | Phe | Arg | Glu | Gly | His | Tyr | Ile | Cys | Glu | Ala | Val | Ala | Glu | Thr |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Gly | Ser | Leu | Val | Ala | Met | Asp | Met | Val | Glu | Val | Asn | Pro | His | Leu | Glu |
|     | 50  |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |     |
| Lys | His | Ala | Ala | Glu | Gln | Thr | Ile | Ala | Val | Gly | Cys | Ser | Leu | Ile | Arg |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |
| Ser | Ala | Leu | Gly | Glu | Thr | Leu | Leu |     |     |     |     |     |     |     |     |
|     |     |     |     |     | 85  |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 1809

&lt;211&gt; 340

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1809

nnaccggtga tcgcatcggc gagcctcggc gcgatgcgcg tggtcgacct tcgccatcgc  
 60  
 cagaccggtg tcacgcatgc gtatcgctc gggcatggca gcctcctcgt gatgcggggc  
 120  
 cccaccagg ccgaatggca gcatcgctg ccgaaagcgc cgggtgtgca gggcgagcgc  
 180  
 gtgaacctga cgtttcggcg cgtgatgccg gtcggtatgg gccggtaaca accggcgtcg  
 240  
 ccgaggtgcc cggatcgccg ggcgattcgc gcccgtttt cgcgattcat gcgcgatcga  
 300  
 tacgggcagg cggtcgcatg tgcggcacgt tgccgcacgn  
 340

<210> 1810  
 <211> 75  
 <212> PRT  
 <213> Homo sapiens

<400> 1810  
 Xaa Pro Val Ile Ala Ser Val Ser Leu Gly Ala Met Arg Val Phe Asp  
 1 5 10 15  
 Leu Arg His Arg Gln Thr Gly Val Thr His Ala Tyr Arg Leu Gly His  
 20 25 30  
 Gly Ser Leu Leu Val Met Arg Gly Pro Thr Gln Ala Glu Trp Gln His  
 35 40 45  
 Arg Val Pro Lys Ala Pro Gly Val Gln Gly Glu Arg Val Asn Leu Thr  
 50 55 60  
 Phe Arg Arg Val Met Pro Val Gly Met Gly Arg  
 65 70 75

<210> 1811  
 <211> 500  
 <212> DNA  
 <213> Homo sapiens

<400> 1811  
 nnacgcgtgc taggaatagc catggactca tcatcagata catgctggat ttataacttca  
 60  
 ctgggtggat tgtatgagct gctcgtaaaa gatgaggctc gcgatatgtg gcatttgttg  
 120  
 ctgaaacggg gcgactttga gaaggcacta acattttgtc gtgatgagac gtgtcgggaag  
 180  
 cagggtactgg aaaagaaggg cgatgcactg ctacacgcag gtcagctcat ggaggccgctc  
 240  
 gagtgctatg ctcaggccca gacaccggcc tttgaacagg ttgtgctttc tttgatggac  
 300  
 gtctgtgccg acaaggcatt gcgtcgatat gtcagactgc gtctcgacaa gatgccgaaa  
 360  
 caagctcgcg tgctctgtct catgctggct acttggetca ttgaattgta tgtggccgccc  
 420  
 attcaagcgc atgaaccac ctccgaacat taccagacac ttttgctgga agcccaggag  
 480  
 acacttgagc ggcacatga  
 500

<210> 1812  
 <211> 166  
 <212> PRT  
 <213> Homo sapiens

<400> 1812  
 Xaa Arg Val Leu Gly Ile Ala Met Asp Ser Ser Ser Asp Thr Cys Trp  
 1 5 10 15  
 Ile Tyr Thr Ser Leu Gly Gly Leu Tyr Glu Leu Leu Val Lys Asp Glu  
 20 25 30  
 Ala Arg Asp Met Trp His Leu Leu Leu Lys Arg Cys Asp Phe Glu Lys

```

      35      40      45
Ala Leu Thr Phe Cys Arg Asp Glu Thr Cys Arg Lys Gln Val Leu Glu
  50      55      60
Lys Lys Gly Asp Ala Leu Leu His Ala Gly Gln Leu Met Glu Ala Val
  65      70      75      80
Glu Cys Tyr Ala Gln Ala Gln Thr Pro Ala Phe Glu Gln Val Val Leu
      85      90      95
Ser Leu Met Asp Val Cys Ala Asp Lys Ala Leu Arg Arg Tyr Val Arg
      100      105      110
Leu Arg Leu Asp Lys Met Pro Lys Gln Ala Arg Val Pro Arg Leu Met
      115      120      125
Leu Ala Thr Trp Leu Ile Glu Leu Tyr Val Ala Ala Ile Gln Ala His
      130      135      140
Glu Pro Thr Ser Glu His Tyr Gln Thr Leu Leu Leu Glu Ala Gln Glu
      145      150      155      160
Thr Leu Glu Arg His His
      165

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<210> 1813  
 <211> 426  
 <212> DNA  
 <213> Homo sapiens

```

<400> 1813
tctagagccg ttgtgatcgg tatccatggt tggatggggg tcatctcgat ggaggagtgt
60
gtcctgaggg gtggcagtga cctggtaggg gtgcctgcgg cgtcgcggct tgcgatcgct
120
ggttctcggg gatgactctc ggatgaatat agatctgcta agacgtcatt agattcgctt
180
ggcgcttggt tgggaacggg tgtgaagcag ccttctgatg gatgtatitt tgcgttggtg
240
aataaggttt caatattaat tgaatatggc gctagatgct gggttaggat cagttgacgt
300
ccgctgtaga tcctccctat ggtcattctg gggccaggcg cttcgccagc tggccatcgc
360
aacaatggtg tggcgaaggg ttatgaggtg agtatggctg agcaagtcgt tggacaggcg
420
tctaca
426

```

<210> 1814  
 <211> 108  
 <212> PRT  
 <213> Homo sapiens

```

<400> 1814
Met Thr Ile Gly Arg Ile Tyr Ser Gly Arg Gln Leu Ile Leu Asn Gln
  1      5      10      15
His Leu Ala Pro Tyr Ser Ile Asn Ile Glu Thr Leu Phe Asn Asn Ala
      20      25      30
Lys Ile His Pro Ser Glu Gly Cys Phe Thr Pro Val Pro Asn Gln Ala
      35      40      45
Pro Ser Glu Ser Asn Asp Val Leu Ala Asp Leu Tyr Ser Ser Glu Ser

```

```

      50              55              60
His Pro Arg Glu Pro Ala Ile Ala Ser Arg Asp Ala Ala Gly Thr Pro
65              70              75              80
Thr Arg Ser Leu Pro Pro Leu Arg Thr His Ser Ser Ile Glu Met Asn
      85              90              95
Pro Ile Gln Pro Trp Ile Pro Ile Thr Thr Ala Leu
      100              105

```

<210> 1815  
 <211> 303  
 <212> DNA  
 <213> Homo sapiens

```

<400> 1815
ggcgcccaca tggctacgct cgcaccgcgg cacaaggtaa gccgtagcgg cgggatcgag
60
cgccaggccg cgcattctcg catggagcgc gatcagttcg gccatcatcg cgtcgtcggg
120
cgtgccgatc tcgaggggca acgccgcgcc gagccgcgaa gccagatcgg gcagcgcgat
180
ccgccagcca tcggcaaatt cgcgagtgat gacgagcaag ggccgcctgg tctcctgcgc
240
ccggttccag cagtggaaca cgttcgctc gggcagacgg gcggcatcgg cgatcacggt
300
acc
303

```

<210> 1816  
 <211> 98  
 <212> PRT  
 <213> Homo sapiens

```

<400> 1816
Met Ala Thr Leu Ala Pro Arg His Lys Val Ser Arg Ser Gly Gly Ile
1      5      10      15
Glu Arg Gln Ala Ala His Leu Gly Met Glu Arg Asp Gln Phe Gly His
20      25      30
His Arg Val Val Gly Arg Ala Asp Leu Glu Gly Gln Arg Arg Ala Glu
35      40      45
Pro Arg Ser Gln Ile Gly Gln Arg Asp Pro Pro Ala Ile Gly Lys Phe
50      55      60
Ala Ser Asp Asp Glu Gln Gly Pro Pro Gly Leu Leu Arg Pro Val Pro
65      70      75      80
Ala Val Glu His Val Arg Leu Gly Gln Thr Gly Gly Ile Gly Asp His
85      90      95
Gly Thr

```

<210> 1817  
 <211> 413  
 <212> DNA  
 <213> Homo sapiens

<400> 1817



nncagcttgc aagaccgctg ccacacagtg tacatcttaa catcacattt cgatgcgtcg  
 60  
 catgcgtttg agccacacg cgatggcaca cttcagggtca ttcacgcaaa gacatggatc  
 120  
 ccgctctcct tatttcacat gctgcatctg cgatggccat tgcagcagc ttttctctt  
 180  
 gtgatgcagg tctgggtagc agcgtatgga tctgctactg cagccactt gccgcatgtg  
 240  
 tacagggcgt gacgcatgtc ccgtcaaact cgctcccaga cgtgtttgtt attgaccaac  
 300  
 ttccagcagc gataccccta atcaaactcc tgtgtgggag gctgtcatg tactactgtc  
 360  
 acttccctga caaagaaatc agcgtgtctc tggctcgaca gcgaggcacg cgt  
 413

<210> 1818  
 <211> 83  
 <212> PRT  
 <213> Homo sapiens

<400> 1818  
 Xaa Ser Leu Gln Asp Arg Gly His Thr Val Tyr Ile Leu Thr Ser His  
 1 5 10 15  
 Phe Asp Ala Ser His Ala Phe Glu Pro Thr Arg Asp Gly Thr Leu Gln  
 20 25 30  
 Val Ile His Ala Lys Thr Trp Ile Pro Arg Ser Leu Phe His Met Leu  
 35 40 45  
 His Leu Arg Trp Pro Phe Ala Ala Val Phe Ser Leu Val Met Gln Val  
 50 55 60  
 Val Val Ala Ala Tyr Gly Ser Ser Leu Ala Arg His Leu Pro His Val  
 65 70 75 80  
 Tyr Arg Ala

<210> 1819  
 <211> 343  
 <212> DNA  
 <213> Homo sapiens

<400> 1819  
 ggatccaaga gtggggcatc aggaacatgc catggttgtc gtggtgctgg aatgagaaca  
 60  
 atcacaagac agataggcct tggcatgac caacagatga aactgtttg ccctgaatgc  
 120  
 aaaggatcag gtgagatcat aagtgacaag gacaaatgcc caagctgtaa aggaacaaaa  
 180  
 gtatgccagg agaagaagg gtttagaggt catgtggaga aaggaatgca acataaccaa  
 240  
 aagattgtat tccaggttca ggctgatgaa gctcctgata cgggtacagg agacattgtt  
 300  
 tttgtcttgc aacttaaaga ccatccaaaa ttaagagga tgt  
 343

<210> 1820

<211> 114  
 <212> PRT  
 <213> Homo sapiens

<400> 1820  
 Gly Ser Lys Ser Gly Ala Ser Gly Thr Cys His Gly Cys Arg Gly Ala  
 1 5 10 15  
 Gly Met Arg Thr Ile Thr Arg Gln Ile Gly Leu Gly Met Ile Gln Gln  
 20 25 30  
 Met Asn Thr Val Cys Pro Glu Cys Lys Gly Ser Gly Glu Ile Ile Ser  
 35 40 45  
 Asp Lys Asp Lys Cys Pro Ser Cys Lys Gly Asn Lys Val Val Gln Glu  
 50 55 60  
 Lys Lys Val Leu Glu Val His Val Glu Lys Gly Met Gln His Asn Gln  
 65 70 75 80  
 Lys Ile Val Phe Gln Gly Gln Ala Asp Glu Ala Pro Asp Thr Gly Thr  
 85 90 95  
 Gly Asp Ile Val Phe Val Leu Gln Leu Lys Asp His Pro Lys Phe Lys  
 100 105 110  
 Arg Met

<210> 1821  
 <211> 285  
 <212> DNA  
 <213> Homo sapiens

<400> 1821  
 aagcttgagt tcagcaagat cttggaggct attaaggcaa acttcaacga caagttcgat  
 60  
 gaggtcggga agaagtgggg aggtggcatc atgggatcca agtcgcaggc caagaccaag  
 120  
 gcccgggaaa agttgctcgc caaggaggcc gcccgaggga tgacctagat tgtctactgc  
 180  
 tgtgtctgcc ctgtagtttg acggggaaga actgatgaac tcgtattgtg gttttccgaa  
 240  
 tctagtttca tatgtttctg tccaccagac catgtttaga agctt  
 285

<210> 1822  
 <211> 55  
 <212> PRT  
 <213> Homo sapiens

<400> 1822  
 Lys Leu Glu Phe Ser Lys Ile Leu Glu Ala Ile Lys Ala Asn Phe Asn  
 1 5 10 15  
 Asp Lys Phe Asp Glu Val Gly Lys Lys Trp Gly Gly Gly Ile Met Gly  
 20 25 30  
 Ser Lys Ser Gln Ala Lys Thr Lys Ala Arg Glu Lys Leu Leu Ala Lys  
 35 40 45  
 Glu Ala Ala Gln Arg Met Thr  
 50 55

<210> 1823  
 <211> 387  
 <212> DNA  
 <213> Homo sapiens

<400> 1823  
 ngttggctgc tgttgctggg cgttctgtcc ctgacgggct gcgcccgttc cgatgcgctg  
 60  
 tggggcgctgg tcgataagct ctgcatggcc aactatcagc aaaagcgaga tccggccccg  
 120  
 tgtgagcaga ttatattgcc gcagggtaaa gcgcagggt ttagcgtgct gcaaaacccg  
 180  
 cgttatccct atcatttcat tctggtgccg acggcgccgc tttccggcat tgaaagcccc  
 240  
 ctgctgctgg ccggagagcg aacggactat ttggctatg catggctgat gcgttaccgg  
 300  
 ctggccgccc agtatggcgg gccggtgccg gacgacaggc tgggcatggc gatcaactcc  
 360  
 gcttacggcc gcagccagaa ccaattg  
 387

<210> 1824  
 <211> 129  
 <212> PRT  
 <213> Homo sapiens

<400> 1824  
 Xaa Trp Leu Leu Leu Leu Gly Val Leu Ser Leu Thr Gly Cys Ala Arg  
 1 5 10 15  
 Ser Asp Ala Leu Trp Gly Val Val Asp Lys Leu Cys Met Ala Asn Tyr  
 20 25 30  
 Gln Gln Lys Arg Asp Pro Ala Pro Cys Glu Gln Ile Tyr Met Pro Gln  
 35 40 45  
 Gly Lys Ala Gln Gly Phe Ser Val Leu Gln Asn Pro Arg Tyr Pro Tyr  
 50 55 60  
 His Phe Ile Leu Val Pro Thr Ala Pro Leu Ser Gly Ile Glu Ser Pro  
 65 70 75 80  
 Leu Leu Leu Ala Gly Glu Arg Thr Asp Tyr Phe Gly Tyr Ala Trp Leu  
 85 90 95  
 Met Arg Tyr Arg Leu Ala Ala Glu Tyr Gly Gly Pro Val Pro Asp Asp  
 100 105 110  
 Arg Leu Gly Met Ala Ile Asn Ser Ala Tyr Gly Arg Ser Gln Asn Gln  
 115 120 125  
 Leu

<210> 1825  
 <211> 413  
 <212> DNA  
 <213> Homo sapiens

<400> 1825  
 gtgcacggac gaccgcgcac agggactcgt gtgccgcgca tgggacgacg gcgatgcgtg  
 60

tgcgtgcata ccgctgctct ggcaggtcgt gcgtgcgatt gtcgccgaca catcggcggc  
 120  
 ttggcacgtc gtgattgggc gcctaggcac catgtcgcag gccgacatgg acatgtgggc  
 180  
 gtcgtgcctc gatacgcgcg acccttcctg ctctcgggtgg gccttgtgtg cctggagcgc  
 240  
 gatgcctggc ctacgggcac gcgatgcac ggtggtctac ctgtcggaca tgccgctggg  
 300  
 tctggcctca ggtgcgtggc cgatccgcgt gcctcgcctc gcgttatgtg tctgccggcg  
 360  
 cctatgccat tcattcctg cagctacgtc acctggtga tctcgacgcg gct  
 413

<210> 1826  
 <211> 124  
 <212> PRT  
 <213> Homo sapiens

<400> 1826  
 Met Gly Arg Arg Cys Val Cys Val His Thr Ala Ala Leu Ala Gly  
 1 5 10 15  
 Arg Ala Cys Asp Cys Arg Arg His Ile Gly Gly Leu Ala Arg Arg Asp  
 20 25 30  
 Trp Ala Pro Arg His His Val Ala Gly Arg His Gly His Val Gly Val  
 35 40 45  
 Val Pro Arg Tyr Ala Arg Pro Phe Leu Leu Ser Val Gly Leu Val Cys  
 50 55 60  
 Leu Glu Arg Asp Ala Trp Pro Thr Gly Thr Arg Cys Ile Gly Gly Leu  
 65 70 75 80  
 Pro Val Gly His Ala Ala Gly Ser Gly Leu Arg Cys Val Ala Asp Pro  
 85 90 95  
 Arg Ala Ser Leu Gly Val Met Cys Leu Pro Ala Pro Met Pro Phe Ile  
 100 105 110  
 Ser Cys Ser Tyr Val Thr Trp Leu Ile Ser Thr Arg  
 115 120

<210> 1827  
 <211> 345  
 <212> DNA  
 <213> Homo sapiens

<400> 1827  
 ctggccaact gggcgccgga cctgttcattg aagcgcgtcg aagccgacca ggaatggctc  
 60  
 ctgttcgatc cgcgcgtggt gccggagttc accgacctgt tcggcgaagc cttcgaagcc  
 120  
 gcctacctgc aggccgaagc gcagggcaag gcccaaccgca cgatctctgc ccgcaagctg  
 180  
 tacgcccgca tgatgcgtac gctggccgag accggcaacg gctggatgac cttcaaggac  
 240  
 aagtgcgaacc gcgccagcaa ccagaccctg cgtccgggca acgtgatcca cctgtccaac  
 300  
 ctgtgcaccg aaatcctgga agtcacttcc aacgatgaaa ccgcg  
 345

```

<400> 1829
attccaatgg ttgtgtctga ttttgatctt ccagaccaac agatagaaat acttcagagt
60
tctgactcgg gatgttcaca gtcctctgct ggggacaact tgagttacga agttgatcct
120
gaaaccgtga atgcccaaga ggattctcaa atgcccaagg aaagctcccc agatgatgat
180
gttcaacagg tagtatttga cctgatatgt aaagttgtaa gtggcctcga agtggaatct
240
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| Ile | Pro | Met | Val | Val | Ser | Asp | Phe | Asp | Leu | Pro | Asp | Gln | Gln | Ile | Glu |
| 1   |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Ile | Leu | Gln | Ser | Ser | Asp | Ser | Gly | Cys | Ser | Gln | Ser | Ser | Ala | Gly | Asp |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |     |
| Asn | Leu | Ser | Tyr | Glu | Val | Asp | Pro | Glu | Thr | Val | Asn | Ala | Gln | Glu | Asp |
|     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Ser | Gln | Met | Pro | Lys | Glu | Ser | Ser | Pro | Asp | Asp | Asp | Val | Gln | Gln | Val |
|     | 50  |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |     |
| Val | Phe | Asp | Leu | Ile | Cys | Lys | Val | Val | Ser | Gly | Leu | Glu | Val | Glu | Ser |
| 65  |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |     |
| Ala | Ser | Val | Thr | Ser | Gln | Leu | Glu | Ile | Glu | Ala | Met | Pro | Pro | Lys | Cys |
|     |     |     | 85  |     |     |     | 90  |     |     |     |     |     | 95  |     |     |
| Ser | Asp | Ile | Asp | Pro | Asp | Glu | Glu | Thr | Ile | Lys | Ile | Glu | Asp | Asp | Ser |
|     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |     |
| Ile | Arg | Gln | Ser | Gln | Asn | Ala | Leu | Leu | Ser | Asn | Glu | Ser | Ser | Gln | Phe |
|     | 115 |     |     |     |     | 120 |     |     |     |     |     | 125 |     |     |     |
| Leu | Ser | Val | Ser | Ala | Glu | Gly | Gly | His | Glu | Cys | Val | Ala | Asn | Gly | Ile |
|     | 130 |     |     |     | 135 |     |     |     |     |     | 140 |     |     |     |     |
| Ser | Arg | Asn | Ser | Ser | Ser | Pro | Cys | Ile | Ser | Gly | Thr | Thr | His | Thr | Leu |
| 145 |     |     | 150 |     |     |     |     |     | 155 |     |     |     |     | 160 |     |
| His | Asp | Ser | Ser | Val | Ala | Ser | Ile | Glu | Thr | Lys | Ser | Arg | Gln | Arg | Ser |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| His | Ser | Ser | Ile | Gln | Phe | Ser | Phe | Lys | Glu | Lys | Leu | Ser | Glu | Lys | Val |
|     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |     |
| Ser | Glu | Lys | Glu | Thr | Ile | Val | Lys | Glu | Ser | Gly | Lys | Gln | Pro | Gly | Ala |
|     | 195 |     |     |     |     | 200 |     |     |     |     |     | 205 |     |     |     |
| Lys | Pro | Lys | Val | Lys | Leu | Ala | Arg | Lys | Lys | Asp | Asp | Asp | Lys | Lys | Lys |
|     | 210 |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |     |
| Ser | Ser | Asn | Glu | Lys | Leu | Lys | Gln | Thr | Ser | Val | Phe | Phe | Ser | Asp | Gly |



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Ile Glu Ser Asp Met Gly Ser Pro Gly Ser Arg Lys Ser Pro Asn Phe
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          275          280          285
Asp Ser Ser Arg Thr Leu Tyr Ala Phe Ser Ala Ile Lys Ala Ile Leu
          290          295          300
Lys Thr Asn Pro Ile Ala Phe Val Asn Ala Ile Ser Thr Thr Ser Val
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Val Asp Ser Asn His Asn Phe Arg Ser Ser Met Tyr Ile Glu Ile Leu
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Ile Ser Leu Cys Leu Tyr Tyr Met Arg Ser His Tyr Pro Thr His Val
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Lys Val Thr Ala Gln Asp Leu Ile Gly Asn Arg Asn Met Gln Met Met
          385          390          395          400
Ser Ile Glu Ile Leu Thr Leu Leu Phe Thr Glu Leu Ala Lys Val Ile
          405          410          415
Glu Ser Ser Ala Lys Gly Phe Pro Ser Phe Ile Ser Asp Met Leu Ser
          420          425          430
Lys Cys Lys Val Gln Lys Val Ile Leu His Cys Leu Leu Ser Ser Ile
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Phe Ser Ala Gln Lys Trp His Ser Glu Lys Met Ala Gly Lys Asn Leu
          450          455          460
Val Ala Val Glu Glu Gly Phe Ser Glu Asp Ser Leu Ile Asn Phe Ser
          465          470          475          480
Glu Asp Glu Phe Asp Asn Gly Ser Thr Leu Gln Ser Gln Leu Leu Lys
          485          490          495
Val Leu Gln Arg Leu Ile Val Leu Glu His Arg Val Met Thr Ile Pro
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Glu Glu Asn Glu Thr Gly Phe Asp Phe Val Val Ser Asp Leu Glu His
          515          520          525
Ile Ser Pro His Gln Pro Met Thr Ser Leu Gln Tyr Leu His Ala Gln
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Pro Ile Thr Cys Gln Gly Met Phe Leu Cys Ala Val Ile Arg Ala Leu
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His Gln His Cys Ala Cys Lys Met His Pro Gln Trp Ile Gly Leu Ile
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Thr Ser Thr Leu Pro Tyr Met Gly Lys Val Leu Gln Arg Val Val Val
          580          585          590
Ser Val Thr Leu Gln Leu Cys Arg Asn Leu Asp Asn Leu Ile Gln Gln
          595          600          605
Tyr Lys Tyr Glu Thr Gly Leu Ser Asp Ser Arg Pro Leu Trp Met Ala
          610          615          620
Ser Ile Ile Pro Pro Asp Met Ile Leu Thr Leu Leu Glu Gly Ile Thr
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Ala Ile Ile His Tyr Cys Leu Leu Asp Pro Thr Thr Gln Tyr His Gln
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Leu Leu Val Ser Val Asp Gln Lys His Leu Phe Glu Ala Arg Ser Gly

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|      |     |     |     |     |      |     |     |     |     |      |     |     |     |     |      |  |  |  |  |  |  |  |
|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|--|--|--|--|--|--|--|
| 660  |     |     |     |     |      |     |     |     |     | 665  |     |     |     |     | 670  |  |  |  |  |  |  |  |
| Ile  | Leu | Ser | Ile | Leu | His  | Met | Ile | Met | Ser | Ser  | Val | Thr | Leu | Leu | Trp  |  |  |  |  |  |  |  |
| 675  |     |     |     |     |      |     |     |     |     | 680  |     |     |     |     | 685  |  |  |  |  |  |  |  |
| Ser  | Ile | Leu | His | Gln | Ala  | Asp | Ser | Ser | Glu | Lys  | Met | Thr | Ile | Ala | Ala  |  |  |  |  |  |  |  |
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| Ser  | Ala | Ser | Leu | Thr | Thr  | Ile | Asn | Leu | Gly | Ala  | Thr | Lys | Asn | Leu | Arg  |  |  |  |  |  |  |  |
| 705  |     |     |     |     | 710  |     |     |     |     |      | 715 |     |     |     | 720  |  |  |  |  |  |  |  |
| Gln  | Gln | Ile | Leu | Glu | Leu  | Leu | Gly | Pro | Ile | Ser  | Met | Asn | His | Gly | Val  |  |  |  |  |  |  |  |
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| His  | Phe | Met | Ala | Ala | Ile  | Ala | Phe | Val | Trp | Asn  | Glu | Arg | Arg | Gln | Asn  |  |  |  |  |  |  |  |
| 740  |     |     |     |     |      |     |     |     |     | 745  |     |     |     |     | 750  |  |  |  |  |  |  |  |
| Lys  | Thr | Thr | Thr | Arg | Thr  | Lys | Val | Ile | Pro | Ala  | Ala | Ser | Glu | Glu | Gln  |  |  |  |  |  |  |  |
| 755  |     |     |     |     |      |     |     |     |     | 760  |     |     |     |     | 765  |  |  |  |  |  |  |  |
| Leu  | Leu | Leu | Val | Glu | Leu  | Val | Arg | Ser | Ile | Ser  | Val | Met | Arg | Ala | Glu  |  |  |  |  |  |  |  |
| 770  |     |     |     |     |      |     |     |     |     | 775  |     |     |     |     | 780  |  |  |  |  |  |  |  |
| Thr  | Val | Ile | Gln | Thr | Val  | Lys | Glu | Val | Leu | Lys  | Gln | Pro | Pro | Ala | Ile  |  |  |  |  |  |  |  |
| 785  |     |     |     |     | 790  |     |     |     |     |      | 795 |     |     |     | 800  |  |  |  |  |  |  |  |
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| Phe  | Tyr | Ala | Tyr | Ile | Gln  | Arg | Ile | Pro | Val | Pro  | Asn | Leu | Val | Asp | Ser  |  |  |  |  |  |  |  |
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| Trp  | Ala | Ser | Leu | Leu | Ile  | Leu | Leu | Lys | Asp | Ser  | Ile | Gln | Leu | Ser | Leu  |  |  |  |  |  |  |  |
| 835  |     |     |     |     |      |     |     |     |     | 840  |     |     |     |     | 845  |  |  |  |  |  |  |  |
| Pro  | Ala | Pro | Gly | Gln | Phe  | Leu | Ile | Leu | Gly | Val  | Leu | Asn | Glu | Phe | Ile  |  |  |  |  |  |  |  |
| 850  |     |     |     |     |      |     |     |     |     | 855  |     |     |     |     | 860  |  |  |  |  |  |  |  |
| Met  | Lys | Asn | Pro | Ser | Leu  | Glu | Asn | Lys | Lys | Asp  | Gln | Arg | Asp | Leu | Gln  |  |  |  |  |  |  |  |
| 865  |     |     |     |     | 870  |     |     |     |     | 875  |     |     |     |     | 880  |  |  |  |  |  |  |  |
| Asp  | Val | Thr | His | Lys | Ile  | Val | Asp | Ala | Ile | Gly  | Ala | Ile | Ala | Gly | Ser  |  |  |  |  |  |  |  |
| 885  |     |     |     |     |      |     |     |     |     | 890  |     |     |     |     | 895  |  |  |  |  |  |  |  |
| Ser  | Leu | Glu | Gln | Thr | Thr  | Trp | Leu | Arg | Arg | Asn  | Leu | Glu | Val | Lys | Pro  |  |  |  |  |  |  |  |
| 900  |     |     |     |     |      |     |     |     |     | 905  |     |     |     |     | 910  |  |  |  |  |  |  |  |
| Ser  | Pro | Lys | Ile | Met | Val  | Asp | Gly | Thr | Asn | Leu  | Glu | Ser | Asp | Val | Glu  |  |  |  |  |  |  |  |
| 915  |     |     |     |     |      |     |     |     |     | 920  |     |     |     |     | 925  |  |  |  |  |  |  |  |
| Asp  | Met | Leu | Ser | Pro | Ala  | Met | Glu | Thr | Ala | Asn  | Ile | Thr | Pro | Ser | Val  |  |  |  |  |  |  |  |
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| Tyr  | Ser | Val | His | Ala | Leu  | Thr | Leu | Leu | Ser | Glu  | Val | Leu | Ala | His | Leu  |  |  |  |  |  |  |  |
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| Leu  | Asp | Met | Val | Phe | Tyr  | Ser | Asp | Glu | Lys | Glu  | Arg | Val | Ile | Pro | Leu  |  |  |  |  |  |  |  |
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| Leu  | Val | Asn | Ile | Met | His  | Tyr | Val | Val | Pro | Tyr  | Leu | Arg | Asn | His | Ser  |  |  |  |  |  |  |  |
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| Ala  | His | Asn | Ala | Pro | Ser  | Tyr | Arg | Ala | Cys | Val  | Gln | Leu | Leu | Ser | Ser  |  |  |  |  |  |  |  |
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| Leu  | Ser | Gly | Tyr | Gln | Tyr  | Thr | Arg | Arg | Ala | Trp  | Lys | Lys | Glu | Ala | Phe  |  |  |  |  |  |  |  |
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| Asp  | Leu | Phe | Met | Asp | Pro  | Ser | Phe | Phe | Gln | Met  | Asp | Ala | Ser | Cys | Val  |  |  |  |  |  |  |  |
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| Asn  | His | Trp | Arg | Ala | Ile  | Met | Asp | Asn | Leu | Met  | Thr | His | Asp | Lys | Thr  |  |  |  |  |  |  |  |
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| Leu  | Asn | Leu | Phe | Ala | Asn  | Arg | Asp | Val | Glu | Leu  | Glu | Gln | Arg | Ala | Met  |  |  |  |  |  |  |  |
| 1075 |     |     |     |     |      |     |     |     |     | 1080 |     |     |     |     | 1085 |  |  |  |  |  |  |  |
| Leu  | Leu | Lys | Arg | Leu | Ala  | Phe | Ala | Ile | Phe | Ser  | Ser | Glu | Ile | Asp | Gln  |  |  |  |  |  |  |  |

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 Tyr Gln Lys Tyr Leu Pro Asp Ile Gln Glu Arg Leu Val Glu Ser Leu  
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 Arg Leu Pro Gln Val Pro Thr Leu His Ser Gln Val Phe Leu Phe Phe  
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 Tyr Asn Ser Gln Arg Trp Leu Asn Leu Tyr Leu Ser Ala Cys Lys Phe  
 1205 1210 1215  
 Leu Asp Leu Ala Leu Ala Leu Pro Ser Glu Asn Leu Pro Gln Phe Gln  
 1220 1225 1230  
 Met Tyr Arg Trp Ala Phe Ile Pro Glu Ala Ser Asp Asp Ser Gly Leu  
 1235 1240 1245  
 Glu Val Arg Arg Gln Gly Ile His Gln Arg Glu Phe Lys Pro Tyr Val  
 1250 1255 1260  
 Val Arg Leu Ala Lys Leu Leu Arg Lys Arg Ala Lys Lys Asn Pro Glu  
 1265 1270 1275 1280  
 Glu Asp Asn Ser Gly Arg Thr Leu Gly Trp Glu Pro Gly His Leu Leu  
 1285 1290 1295  
 Leu Thr Ile Cys Thr Val Arg Ser Met Glu Gln Leu Leu Pro Phe Phe  
 1300 1305 1310  
 Asn Val Leu Ser Gln Val Phe Asn Ser Lys Val Thr Ser Arg Cys Gly  
 1315 1320 1325  
 Gly His Ser Gly Ser Pro Ile Leu Tyr Ser Asn Ala Phe Pro Asn Lys  
 1330 1335 1340  
 Asp Met Lys Leu Glu Asn His Lys Pro Cys Ser Ser Lys Ala Arg Gln  
 1345 1350 1355 1360  
 Lys Ile Glu Glu Met Val Glu Lys Asp Phe Leu Glu Gly Met Ile Lys  
 1365 1370 1375  
 Thr

<210> 1831  
 <211> 508  
 <212> DNA  
 <213> Homo sapiens

<400> 1831  
 nntcatgaaa ggagaggccg tatgccatt gtcaaaactca gtgcgcagtt cgtgcgcgaa  
 60  
 gcggtttgcc cgcccgaaa atccaaggtg gactattacg acaacgcact caaagggttc  
 120  
 atcctggagg ctgcaccttc aggtggcaaa accttttacc tgcgctatca cgacagccac  
 180  
 ggcaagctgc gccaatgcaa gatcggtgat gctgctgcgg tcagctacga caaggcccg  
 240  
 cagaaggcca tgcggttgcg ttggaaggtg gaatgggggg gcaatccatt ggaggagcgc  
 300

caagccttgc gtgcggtacc gaccctggcc gagttcatcc gcgagaccta tgtgccgcac  
 360  
 atccacctgc accggaggaa ttttcagtcc acgctgagct tcctcaagtg ccatgtcctg  
 420  
 ccgcgctttg gagccaagca cctggacgaa atcacgacca acatgctggc cgaggctcac  
 480  
 caggatctgc gcacgaaggc ctacgcgt  
 508

<210> 1832  
 <211> 169  
 <212> PRT  
 <213> Homo sapiens

<400> 1832  
 Xaa His Glu Arg Arg Gly Arg Met Pro Ile Val Lys Leu Ser Ala Gln  
 1 5 10 15  
 Phe Val Arg Glu Ala Val Cys Pro Pro Gly Lys Ser Lys Val Asp Tyr  
 20 25 30  
 Tyr Asp Asn Ala Leu Lys Gly Phe Ile Leu Glu Ala Arg Pro Ser Gly  
 35 40 45  
 Gly Lys Thr Phe Tyr Leu Arg Tyr His Asp Ser His Gly Lys Leu Arg  
 50 55 60  
 Gln Cys Lys Ile Gly Asp Ala Ala Val Ser Tyr Asp Lys Ala Arg  
 65 70 75 80  
 Gln Lys Ala Met Arg Leu Arg Trp Lys Val Glu Trp Gly Gly Asn Pro  
 85 90 95  
 Leu Glu Glu Arg Gln Ala Leu Arg Ala Val Pro Thr Leu Ala Glu Phe  
 100 105 110  
 Ile Arg Glu Thr Tyr Val Pro His Ile His Leu His Arg Arg Asn Phe  
 115 120 125  
 Gln Ser Thr Leu Ser Phe Leu Lys Cys His Val Leu Pro Arg Phe Gly  
 130 135 140  
 Ala Lys His Leu Asp Glu Ile Thr Thr Asn Met Leu Ala Glu Ala His  
 145 150 155 160  
 Gln Asp Leu Arg Thr Lys Gly Tyr Ala  
 165

<210> 1833  
 <211> 430  
 <212> DNA  
 <213> Homo sapiens

<400> 1833  
 acgcgtgcga tgttgaagga gcgcttcggc atcgggcatg cgacgctgca ggttgaactg  
 60  
 tccggtgccg aggcagacga tgccgaggcg ggcggctgct aagggtcgcc gtcgttcagt  
 120  
 ggcgcaaagc ggcgatgac gcgtcgaaca gcgttactcc agccagcggg ccaaccaaca  
 180  
 gcataccag gttgaaaccg atgatccacg ccgcgatgct ttctcggcgc gggtttggca  
 240  
 gcggcttggg ctccgcttcc cagcgttccg gcggcgccca gccattttgg aaatcgacga  
 300

acatctccgg cgctcctgct gtcaggcgct gaaggatcg aaagtcatgc gccgtgacaa  
 360  
 aggaagatcg gcgacacagg agccgaagcg ccgccgctg caataagcgc gcgcgatcgc  
 420  
 aattgtcggg  
 430

<210> 1834  
 <211> 122  
 <212> PRT  
 <213> Homo sapiens

<400> 1834  
 Met Arg Arg Cys Arg Leu Asn Cys Pro Val Pro Arg Gln Thr Met Pro  
 1 5 10 15  
 Arg Arg Ala Ala Ala Lys Gly Arg Arg Arg Ser Val Ala Gln Ser Gly  
 20 25 30  
 Asp Asp Arg Val Glu Gln Arg Tyr Ser Ser Gln Arg Ala Asn Gln Gln  
 35 40 45  
 His His Gln Val Glu Thr Asp Asp Pro Arg Arg Asp Ala Phe Ser Ala  
 50 55 60  
 Arg Val Trp Gln Arg Leu Gly Leu Gly Phe Pro Ala Phe Arg Arg Arg  
 65 70 75 80  
 Pro Ala Ile Leu Glu Ile Asp Glu His Leu Arg Arg Ser Cys Cys Gln  
 85 90 95  
 Ala Leu Lys Val Ser Lys Val Met Arg Arg Asp Lys Gly Arg Ser Ala  
 100 105 110  
 Thr Gln Glu Pro Lys Arg Arg Arg Leu Gln  
 115 120

<210> 1835  
 <211> 677  
 <212> DNA  
 <213> Homo sapiens

<400> 1835  
 nataactcaag gactttgacg gcacccgagc ccggttgctc cctgaggcca tcatgaaccc  
 60  
 cccagtggca ccctatgcta ctgtggcacc cagcacttta gcccaccccc aggcccaggc  
 120  
 tctggcccg cagcaggccc tgcagcatgc acagaccctg gcccatgccc ctccccagac  
 180  
 gctgcagcac cctcagggtg tcccggcacc ccaggcactg tcccaccctc agagcctcca  
 240  
 gcagcctcag ggcttgggcc accctcagcc catggcccaa acccagggtg tgggtccaccc  
 300  
 tcaggccctg gctcaccagg gtctccagca cccccacaat cccttgctgc atggaggccg  
 360  
 gaagatgccg gactcagatg ccccccgaa tgtgaccgtg tctacctcaa ctatccccct  
 420  
 ttcaatggcg gccactctgc agcacagcca gcctccggac ctgagtagca tcgtgcacca  
 480  
 gatcaaccag ttttgccaga cgagggcagg catcagcact acctcagtgt gtgaggggcca  
 540

gatcgccaac cccagcccca ttagtcgcag tctgtcatc aatgcaagca cccgggtgtc  
 600  
 gaccacagc gtccccacac caatgccttc atgtgtggc aatcccatgg agcacacca  
 660  
 cgcgccacc gccgcgg  
 677

<210> 1836  
 <211> 140  
 <212> PRT  
 <213> Homo sapiens

<400> 1836  
 Gly His His Glu Pro Pro Ser Gly Thr Leu Cys Tyr Cys Gly Thr Gln  
 1 5 10 15  
 His Phe Ser Pro Pro Gly Pro Gly Ser Gly Pro Pro Ala Gly Pro  
 20 25 30  
 Ala Ala Cys Thr Asp Pro Gly Pro Cys Pro Ser Pro Asp Ala Ala Ala  
 35 40 45  
 Pro Ser Gly Tyr Pro Ala Thr Pro Gly Thr Val Pro Pro Ser Glu Pro  
 50 55 60  
 Pro Ala Ala Ser Gly Pro Gly Pro Pro Ser Ala His Gly Pro Asn Pro  
 65 70 75 80  
 Gly Leu Gly Pro Pro Ser Gly Pro Gly Ser Pro Gly Ser Pro Ala Pro  
 85 90 95  
 Pro Gln Ser Leu Ala Ala Trp Arg Pro Glu Asp Ala Arg Leu Arg Cys  
 100 105 110  
 Pro Pro Glu Cys Asp Arg Val Tyr Leu Asn Tyr Pro Pro Phe Asn Gly  
 115 120 125  
 Gly His Ser Ala Ala Gln Pro Ala Ser Gly Pro Glu  
 130 135 140

<210> 1837  
 <211> 564  
 <212> DNA  
 <213> Homo sapiens

<400> 1837  
 nntctagaac actctgcccc tgaatctgta ccgggattgt ttggcccgtc acgaactcgt  
 60  
 acggtcgata tcaatatcac tgggttttct tcacagtatt tacccgcccc ctatggacca  
 120  
 attgctgcgg acgtcaaaca aacctgggcg tgggacccac aggatctgac gattgtctca  
 180  
 atttctgctg atcacgacca taacctccga tatgcagtac agcatttcgg cgcaagcccc  
 240  
 accccgatcc agtaaccttc gataacgcga aagccggcac cccacataac tcgngtgta  
 300  
 accgaagtcc ctgccaacgt tccatccgac ataggggagt taactaaccg aattatcaag  
 360  
 gggaaatcta cccccgtaac caaggccatc gcgattcaaa actggcttcg tgacagcgct  
 420  
 cgattccatt acgacatcaa cgcacccgaa ggtgacggct atcaggtact ggaaaacttc  
 480

ctgctgcaca cccaccgagg ttattgcac catttcgagg cgtcaatggc actcatggca  
 540  
 cgacttgaag gtattccgac acgc  
 564

<210> 1838  
 <211> 84  
 <212> PRT  
 <213> Homo sapiens

<400> 1838  
 Xaa Leu Glu His Ser Ala Pro Glu Ser Val Pro Gly Leu Phe Gly Pro  
 1 5 10 15  
 Ser Arg Thr Arg Thr Val Asp Ile Asn Ile Thr Gly Phe Ser Ser Gln  
 20 25 30  
 Tyr Leu Pro Ala Pro Tyr Gly Pro Ile Ala Ala Asp Val Lys Gln Thr  
 35 40 45  
 Trp Ala Trp Asp Pro Gln Asp Leu Thr Ile Val Ser Thr Ser Ala Asp  
 50 55 60  
 His Asp His Asn Leu Arg Tyr Ala Val Gln His Phe Gly Ala Ser Pro  
 65 70 75 80  
 Thr Pro Ile Gln

<210> 1839  
 <211> 300  
 <212> DNA  
 <213> Homo sapiens

<400> 1839  
 ncaatacggc tgaacaccgc tgatatcacc cgtactttcc ccgtcaacgg aaaattttcc  
 60  
 gaagttcagg caaaggctta tcaggcgggtg ctggacgctg cagatgcggc atttaaggca  
 120  
 gccgttcttg gcaataaatt ccgcgacgac catgctgcag cgatgaatgt tctcgcctcc  
 180  
 cgccttgagg actgggggct tatgccggtc agcgcaagg tcgctctttc ggacgagggc  
 240  
 gggcaacacc gtcgttggat gccgcacggc accagccacc atctagggct ggatgtgcac  
 300

<210> 1840  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 1840  
 Xaa Ile Arg Leu Asn Thr Ala Asp Ile Thr Arg Thr Phe Pro Val Asn  
 1 5 10 15  
 Gly Lys Phe Ser Glu Val Gln Ala Lys Ala Tyr Gln Ala Val Leu Asp  
 20 25 30  
 Ala Ala Asp Ala Ala Phe Lys Ala Ala Val Pro Gly Asn Lys Phe Arg  
 35 40 45  
 Asp Val His Ala Ala Ala Met Asn Val Leu Ala Ser Arg Leu Glu Asp

```

      50              55              60
Trp Gly Leu Met Pro Val Ser Ala Lys Val Ala Leu Ser Asp Glu Gly
65              70              75              80
Gly Gln His Arg Arg Trp Met Pro His Gly Thr Ser His His Leu Gly
      85              90              95
Leu Asp Val His
      100

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<210> 1841  
 <211> 330  
 <212> DNA  
 <213> Homo sapiens

```

<400> 1841
nnctccaaga acgtcccga gtggggcccc agggcgctcg aactccccgg cgggcccggg
60
gtcgatccgg tggtcgagat cggcgggtccc ggtacgctag cccaatcgat ggtcgccccg
120
cgcgtcggcg cccatgtcgc cttgatecggc gtgcttnacg gggattgtcg ggcgggtgagg
180
acggcgctgc tgatgagcaa gaatctgcgc gtgcaagggc tgccggtcgg cagccgcgcg
240
cagcaactcg cgatgatcgc gggggtcgag gcgaacggca tccgtccgat cctcgaccag
300
catttcccgc tcgaaaatct ccccgacgcg
330

```

<210> 1842  
 <211> 110  
 <212> PRT  
 <213> Homo sapiens

```

<400> 1842
Xaa Ser Lys Asn Val Pro Glu Trp Gly Pro Arg Ala Leu Glu Leu Pro
1      5      10      15
Gly Gly Pro Gly Val Asp Pro Val Val Glu Ile Gly Gly Pro Gly Thr
      20      25      30
Leu Ala Gln Ser Met Val Ala Pro Arg Val Gly Ala His Val Ala Leu
      35      40      45
Ile Gly Val Leu Xaa Gly Asp Cys Arg Ala Val Arg Thr Ala Leu Leu
50      55      60
Met Ser Lys Asn Leu Arg Val Gln Gly Leu Pro Val Gly Ser Arg Ala
65      70      75      80
Gln Gln Leu Ala Met Ile Ala Gly Val Glu Ala Asn Gly Ile Arg Pro
      85      90      95
Ile Leu Asp Gln His Phe Pro Leu Glu Asn Leu Pro Asp Ala
      100      105      110

```

<210> 1843  
 <211> 473  
 <212> DNA  
 <213> Homo sapiens

<400> 1843



aagctttggc atctccagca aaagatgtgc tatttactga taccatcacc atgaaggcca  
 60  
 acagttttga gtccagatta acaccaagca gggtcatgaa agccttaagt tatgcatcat  
 120  
 tagataaaga agattttattg agtcctatta atcaaaatac cctgcaacga tcttcctcag  
 180  
 tgcgggtccat ggtgtccagt gccacatatg ggggttcaga tgattacatt ggtcttgctc  
 240  
 tcccgggtgga tataaatgat atattccagg taaaggatat tccctatttt cagacaaaaa  
 300  
 acataccacc acatgatgat cgagggtgcaa gagcatttgc ccatgatgca ggaggtcttc  
 360  
 catctggaac tggaggtctt gtaaaaaatt cttttcactt gctacgacag cagatgagtc  
 420  
 ttacggaaat aatgaattca atccattcag atgcctctcn cnnccnccccc ccc  
 473

<210> 1844  
 <211> 141  
 <212> PRT  
 <213> Homo sapiens

<400> 1844  
 Met Lys Ala Asn Ser Phe Glu Ser Arg Leu Thr Pro Ser Arg Phe Met  
 1 5 10 15  
 Lys Ala Leu Ser Tyr Ala Ser Leu Asp Lys Glu Asp Leu Leu Ser Pro  
 20 25 30  
 Ile Asn Gln Asn Thr Leu Gln Arg Ser Ser Ser Val Arg Ser Met Val  
 35 40 45  
 Ser Ser Ala Thr Tyr Gly Gly Ser Asp Asp Tyr Ile Gly Leu Ala Leu  
 50 55 60  
 Pro Val Asp Ile Asn Asp Ile Phe Gln Val Lys Asp Ile Pro Tyr Phe  
 65 70 75 80  
 Gln Thr Lys Asn Ile Pro Pro His Asp Asp Arg Gly Ala Arg Ala Phe  
 85 90 95  
 Ala His Asp Ala Gly Gly Leu Pro Ser Gly Thr Gly Gly Leu Val Lys  
 100 105 110  
 Asn Ser Phe His Leu Leu Arg Gln Gln Met Ser Leu Thr Glu Ile Met  
 115 120 125  
 Asn Ser Ile His Ser Asp Ala Ser Xaa Xaa Xaa Xaa Pro  
 130 135 140

<210> 1845  
 <211> 390  
 <212> DNA  
 <213> Homo sapiens

<400> 1845  
 aagcttacga cgcttagctt tggagacctg aaccacttga tcagtgaac aatgagtgga  
 60  
 gtgacttgct gctccgctt cccggggcag ctcaactcgg accttcggaa acttgcaagt  
 120  
 aacctgattc cattccctcg cctgcacttt tttatggctg gctttgcgcc actcacctcg  
 180

cgtggctccc agcagtaccg tgctctcact gtccctgagc tgaccagca gatgtgggac  
 240  
 tccaagaaca tgatgtgtgc tgctgacccg cgatcatggcc gctacctcac agtatctgcc  
 300  
 atgttccgtg gaaagatgag caccaaggag gtggacgagc agatgctgaa cgtgcagaac  
 360  
 aagaactcctt cctacttcgt ggagtggatc  
 390

<210> 1846  
 <211> 130  
 <212> PRT  
 <213> Homo sapiens

<400> 1846  
 Lys Leu Thr Thr Pro Ser Phe Gly Asp Leu Asn His Leu Ile Ser Ala  
 1 5 10 15  
 Thr Met Ser Gly Val Thr Cys Cys Leu Arg Phe Pro Gly Gln Leu Asn  
 20 25 30  
 Ser Asp Leu Arg Lys Leu Ala Val Asn Leu Ile Pro Phe Pro Arg Leu  
 35 40 45  
 His Phe Phe Met Val Gly Phe Ala Pro Leu Thr Ser Arg Gly Ser Gln  
 50 55 60  
 Gln Tyr Arg Ala Leu Thr Val Pro Glu Leu Thr Gln Gln Met Trp Asp  
 65 70 75 80  
 Ser Lys Asn Met Met Cys Ala Ala Asp Pro Arg His Gly Arg Tyr Leu  
 85 90 95  
 Thr Val Ser Ala Met Phe Arg Gly Lys Met Ser Thr Lys Glu Val Asp  
 100 105 110  
 Glu Gln Met Leu Asn Val Gln Asn Lys Asn Ser Ser Tyr Phe Val Glu  
 115 120 125  
 Trp Ile  
 130

<210> 1847  
 <211> 343  
 <212> DNA  
 <213> Homo sapiens

<400> 1847  
 cagccgtgct ttctgctgc aactcgggaa cggtatatc gcgcagatcc aacagttcca  
 60  
 tggctcgaag agtagtaaaa atatcaataa ctggcagagc atcgcgtaa gctggcgacc  
 120  
 ctggccgccc ccgcgttggc cgatcacgcc atgttggagc aggccttcca gctgttccag  
 180  
 caaaaaagt ggcgacaatc tcctgccgga tggctcgggt ttcgacttca gggagcgca  
 240  
 tgcactgcac tacgtcgtct atgacctgga gccgctgggt caggcgggcc tggcgggcaa  
 300  
 gccctaacgg tggcaactgg ctgacttaca ccgccccac cgn  
 343

<210> 1848

<211> 94  
 <212> PRT  
 <213> Homo sapiens

<400> 1848  
 Met Ala Arg Arg Val Val Lys Ile Ser Ile Thr Gly Arg Ala Ser Arg  
 1 5 10 15  
 Gln Ala Gly Asp Pro Gly Arg Arg Arg Val Gly Arg Ser Arg His Val  
 20 25 30  
 Gly Ala Gly Leu Pro Ala Val Pro Ala Lys Lys Leu Arg Thr Ile Ser  
 35 40 45  
 Cys Arg Met Ala Arg Cys Ser Thr Ser Gly Ser Ala Met His Cys Thr  
 50 55 60  
 Thr Ser Ser Met Thr Trp Ser Arg Trp Phe Arg Arg Pro Trp Arg Ala  
 65 70 75 80  
 Ser Pro Asn Gly Gly Asn Trp Leu Thr Tyr Thr Ala Pro Thr  
 85 90

<210> 1849  
 <211> 390  
 <212> DNA  
 <213> Homo sapiens

<400> 1849  
 cggaagaac aggttcagca aagagcaata gaatgttccc gggctctcag tgcgattctt  
 60  
 gacattgaac atggagaccc aaaagagaat gtactagggt cagcttttga catgaaacag  
 120  
 ctgaaggatg ctattgatga gactaaaata gctttgatgg gacattcttt tggaggagca  
 180  
 acagttcttc aagcccttag tgaggaccag agattcagat gtggagttgc tcttgatcca  
 240  
 tggatgtatc cgggtgaacga agagctgtac tccagaaccc tccagcctct cctctttatc  
 300  
 aactctgcca aattccagac tccaaaggac atcgcaaaaa tgaaaaagtt ctaccagcct  
 360  
 gacaaggaaa ggaaanatga ttacaatcaa  
 390

<210> 1850  
 <211> 130  
 <212> PRT  
 <213> Homo sapiens

<400> 1850  
 Arg Lys Glu Gln Val Gln Gln Arg Ala Ile Glu Cys Ser Arg Ala Leu  
 1 5 10 15  
 Ser Ala Ile Leu Asp Ile Glu His Gly Asp Pro Lys Glu Asn Val Leu  
 20 25 30  
 Gly Ser Ala Phe Asp Met Lys Gln Leu Lys Asp Ala Ile Asp Glu Thr  
 35 40 45  
 Lys Ile Ala Leu Met Gly His Ser Phe Gly Gly Ala Thr Val Leu Gln  
 50 55 60  
 Ala Leu Ser Glu Asp Gln Arg Phe Arg Cys Gly Val Ala Leu Asp Pro

```

65              70              75              80
Trp Met Tyr Pro Val Asn Glu Glu Leu Tyr Ser Arg Thr Leu Gln Pro
              85              90              95
Leu Leu Phe Ile Asn Ser Ala Lys Phe Gln Thr Pro Lys Asp Ile Ala
              100              105              110
Lys Met Lys Lys Phe Tyr Gln Pro Asp Lys Glu Arg Lys Xaa Asp Tyr
              115              120              125
Asn Gln
              130

```

<210> 1851  
 <211> 574  
 <212> DNA  
 <213> Homo sapiens

```

<400> 1851
ncgatcggag aggcctttccg cactggtgac ttggactcta agcccgaccc cagccggagc
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ttcaggcctt accgagctga agacaatgat tcctatgcct ctgagatcaa ggagctgcag
120
ctggtgctgg ctgaggccca cgacagcctc cggggcttgc aagagcagct ctcccaggag
180
cggcagctac gaaaggagga ggccgacaat ttcaaccaga aaatggtcca gctgaaggag
240
gaccagcaga gggcgctcct gaggcgggag tttgagctgc agagtctgag cctccagcgg
300
aggctggagc agaaattctg gagccaggag aagaacatgc tgggtgcagga gtcccagcaa
360
ttcaagcaca acttctgct gctcttcctg aagctcaggt ggttcctcaa gcgctggcgg
420
cagggcaagg ttttgcccag cgaaggggat gacttcctcg aggtgaacag catgaaggac
480
ctgtacttgc tgatggagga agacgagata aacgctcagc attctgataa caaggcctgc
540
acggggggaca gctggaccca gaacacgccc aatg
574

```

<210> 1852  
 <211> 191  
 <212> PRT  
 <213> Homo sapiens

```

<400> 1852
Xaa Ile Gly Glu Ala Phe Arg Thr Gly Asp Leu Asp Ser Lys Pro Asp
1              5              10              15
Pro Ser Arg Ser Phe Arg Pro Tyr Arg Ala Glu Asp Asn Asp Ser Tyr
              20              25              30
Ala Ser Glu Ile Lys Glu Leu Gln Leu Val Leu Ala Glu Ala His Asp
              35              40              45
Ser Leu Arg Gly Leu Gln Glu Gln Leu Ser Gln Glu Arg Gln Leu Arg
              50              55              60
Lys Glu Glu Ala Asp Asn Phe Asn Gln Lys Met Val Gln Leu Lys Glu
65              70              75              80
Asp Gln Gln Arg Ala Leu Leu Arg Arg Glu Phe Glu Leu Gln Ser Leu

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[illegible]

<210> 1855  
 <211> 429  
 <212> DNA  
 <213> Homo sapiens

<400> 1855  
 gcgtccttcg cgtacgtgga cgagggcggg caggtgttcg tccagtgcag caccagcac  
 60  
 ccgagcgaaa cgcaggaaat cgtggcgac gtcctggacc tggacaacca cgaggtcacg  
 120  
 gtgcagtgct tgcgcattgg cggtggcttt ggcggtaagg aaatgcagcc gcacgggttc  
 180  
 gccgcgatcg cagcactcgg cgcgacctg accgggacgac cggttcgact gcgactgacc  
 240  
 cgaaaccagg acatcaccat ctccggaaag cgccacccat acctcgcgga gtgggacgtg  
 300  
 gccttcgacg acgacggccg cctccaggct ctgcgcgcca ccgtcaccag cgacggcggg  
 360  
 tggagccttg acctctcgga gccggtgatg cagcggacgg tgtgtcacat cgataactcc  
 420  
 tattggatc  
 429

<210> 1856  
 <211> 143  
 <212> PRT  
 <213> Homo sapiens

<400> 1856  
 Ala Ser Phe Ala Tyr Val Asp Glu Gly Gly Gln Val Phe Val Gln Cys  
 1 5 10 15  
 Ser Thr Gln His Pro Ser Glu Thr Gln Glu Ile Val Ala His Val Leu  
 20 25 30  
 Asp Leu Asp Asn His Glu Val Thr Val Gln Cys Leu Arg Met Gly Gly  
 35 40 45  
 Gly Phe Gly Gly Lys Glu Met Gln Pro His Gly Phe Ala Ala Ile Ala  
 50 55 60  
 Ala Leu Gly Ala Thr Leu Thr Gly Arg Pro Val Arg Leu Arg Leu Thr  
 65 70 75 80  
 Arg Asn Gln Asp Ile Thr Ile Ser Gly Lys Arg His Pro Tyr Leu Ala  
 85 90 95  
 Glu Trp Asp Val Ala Phe Asp Asp Asp Gly Arg Leu Gln Ala Leu Arg  
 100 105 110  
 Ala Thr Val Thr Ser Asp Gly Gly Trp Ser Leu Asp Leu Ser Glu Pro  
 115 120 125  
 Val Met Gln Arg Thr Val Cys His Ile Asp Asn Ser Tyr Trp Ile  
 130 135 140

<210> 1857  
 <211> 393  
 <212> DNA  
 <213> Homo sapiens

<400> 1857

gtgcacgccg ctgccccagc cgtcgcctac cgatcaacag acgcagccgc cgtgcgttga  
 60  
 gataccagcc gagcacgac atgctcagca tggtcagcag cagccagaac ggaaatcgca  
 120  
 gcaggcgctc gaacagctca ctgccaccca gcaccagcgg gattgccccg gccacgacca  
 180  
 gtgcgcgcgag gagcagccac catcgcccgc tcatgctgcg gcactcgata ccaatacgtt  
 240  
 gcgcttcaac caatcgatct tggtcgagggc atgccgccca tcttccaaca ggcgagtcac  
 300  
 cagactcagc cagtaacacc gcgaaaaatc gtggcgcatg tcgacagggt gcaaaccgag  
 360  
 acgcagcacg ggtgcctgtc ggtggcgggc gag  
 393

&lt;210&gt; 1858

&lt;211&gt; 104

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1858

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Leu | Ser | Met | Val | Ser | Ser | Ser | Gln | Asn | Gly | Asn | Arg | Ser | Arg | Arg |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ser | Asn | Ser | Ser | Leu | Pro | Pro | Ser | Thr | Ser | Gly | Ile | Ala | Pro | Ala | Thr |
|     |     |     |     | 20  |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Thr | Ser | Ala | Pro | Arg | Ser | Ser | His | His | Arg | Pro | Leu | Met | Leu | Arg | His |
|     |     |     |     | 35  |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ser | Ile | Pro | Ile | Arg | Cys | Ala | Ser | Thr | Asn | Arg | Ser | Trp | Ser | Arg | His |
|     |     |     |     | 50  |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Ala | Ala | His | Leu | Pro | Thr | Gly | Glu | Ser | Pro | Asp | Ser | Ala | Ser | Asn | Thr |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Ala | Lys | Asn | Arg | Gly | Ala | Cys | Arg | Gln | Gly | Ala | Asn | Arg | Asp | Ala | Ala |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Arg | Val | Pro | Val | Gly | Gly | Gly | Arg |     |     |     |     |     |     |     |     |
|     |     |     |     | 100 |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 1859

&lt;211&gt; 345

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1859

nagatctggc gcctcgtcac caacttcctc tacttccgca agatggattt ggattttctg  
 60  
 ttccacatgt tttttctcgc acgatactgc aagcttctgg aggagaactc atttagagga  
 120  
 agaactgccg acttttttta catgctcttg tttggtgcta ctgtcctaac tagcattggt  
 180  
 ctgatcggag ggatgatacc ttacatttcc gagacatttg ccagaattct gttcctgagc  
 240  
 aattcattga cgtttatgat ggtttatgtc tggagcaagc acaatcctat catccatatg  
 300  
 agcaatctgg gcctgttcac ctttacgggt gcatacttac catgg  
 345

<210> 1860  
 <211> 115  
 <212> PRT  
 <213> Homo sapiens

<400> 1860  
 Xaa Ile Trp Arg Leu Val Thr Asn Phe Leu Tyr Phe Arg Lys Met Asp  
 1 5 10 15  
 Leu Asp Phe Leu Phe His Met Phe Phe Leu Ala Arg Tyr Cys Lys Leu  
 20 25 30  
 Leu Glu Glu Asn Ser Phe Arg Gly Arg Thr Ala Asp Phe Phe Tyr Met  
 35 40 45  
 Leu Leu Phe Gly Ala Thr Val Leu Thr Ser Ile Val Leu Ile Gly Gly  
 50 55 60  
 Met Ile Pro Tyr Ile Ser Glu Thr Phe Ala Arg Ile Leu Phe Leu Ser  
 65 70 75 80  
 Asn Ser Leu Thr Phe Met Met Val Tyr Val Trp Ser Lys His Asn Pro  
 85 90 95  
 Ile Ile His Met Ser Asn Leu Gly Leu Phe Thr Phe Thr Ala Ala Tyr  
 100 105 110  
 Leu Pro Trp  
 115

<210> 1861  
 <211> 435  
 <212> DNA  
 <213> Homo sapiens

<400> 1861  
 gcgttgactg tagtgagtga cgaagctgat atacaaaatg cgccgggcgt tagaaaagcc  
 60  
 aatagtgagc ttcattcagt cggcttaggt gttatgaact tacatggcta tcttgctaaa  
 120  
 aacaaaattg gctatgagtc ggaagaagct aaagattttg ctaatatatt ctttatgatg  
 180  
 atgaattact attcacttga aagatcaatg caaatagcaa aagaaagaca ggaaacgttt  
 240  
 aaagactttg ataagtcaga ttatgcaaat ggaaaatatt tcgaatttta tacttcgcaa  
 300  
 tcatttgaac cgaaatacga aaaagtacgt aaattatttg atggtttaga aatcccaacg  
 360  
 cctgaagatt ggaaagcatt gcaaaaagaa gttgaaactc acggtttatt ccatgcttat  
 420  
 cgttttagcga ttgca  
 435

<210> 1862  
 <211> 145  
 <212> PRT  
 <213> Homo sapiens

<400> 1862  
 Ala Leu Thr Val Val Ser Asp Glu Ala Asp Ile Gln Asn Ala Pro Gly



```

      1           5           10           15
Val Arg Lys Ala Asn Ser Glu Leu His Ser Val Gly Leu Gly Val Met
      20           25           30
Asn Leu His Gly Tyr Leu Ala Lys Asn Lys Ile Gly Tyr Glu Ser Glu
      35           40           45
Glu Ala Lys Asp Phe Ala Asn Ile Phe Phe Met Met Met Asn Tyr Tyr
      50           55           60
Ser Leu Glu Arg Ser Met Gln Ile Ala Lys Glu Arg Gln Glu Thr Phe
      65           70           75           80
Lys Asp Phe Asp Lys Ser Asp Tyr Ala Asn Gly Lys Tyr Phe Glu Phe
      85           90           95
Tyr Thr Ser Gln Ser Phe Glu Pro Lys Tyr Glu Lys Val Arg Lys Leu
      100          105          110
Phe Asp Gly Leu Glu Ile Pro Thr Pro Glu Asp Trp Lys Ala Leu Gln
      115          120          125
Lys Glu Val Glu Thr His Gly Leu Phe His Ala Tyr Arg Leu Ala Ile
      130          135          140
Ala
145

```

&lt;210&gt; 1863

&lt;211&gt; 792

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1863

```

nggacacctca cgcccgccat catacgtggg atacgttga gcaaatacgt catgacgggg
60
tctccgtcgt gctcactacc cacaacatgg atgaggctca acggctgggt gatcacgtct
120
ggatcgtcga tcgcggcagg gtcgcaactc atggaactgt gccagagctc accgctgagt
180
cgagtttgga agatgtgttc ctactcaca ctagtaccg cgcagcaggg aggaattgac
240
atgacgacac tcgatctccg ccccgacact caggccgcac cggctgctgc acgctgctg
300
aaccacgctc tcaccgaggt gcgtctggtg atgcgcaacg gtgagcagct gctactagct
360
ctcgtcatte ccacggtgat catcgtcgcc gggcgcttcc tggcgggccg ggtcggactg
420
acgatggacg tcttagcacc ctactgctg gcgctcgcca tctggctgac atgtttcact
480
tcccaagcga tcatgaccgg ttttgaacgc cgttacgggg tgctcgaacg attgtccgca
540
accccgtagt gtcggtcggg tctgctagct ggcaaggcga tggcttattc cgttatcagt
600
ctcgtcagg tgatactgct tgtcatcacc tcttttagcgc tgggctggca ccccccaggt
660
tccggcctgg cctggctccc aacctgggtg agcgttgtgc tcgccatgat gacattcggg
720
ctcgcagcac tggcaatggc cggcgctggc aaagctgaag tcactctcgg actggccaac
780
ttggtataca tc
792

```

<210> 1864  
 <211> 264  
 <212> PRT  
 <213> Homo sapiens

<400> 1864  
 Xaa Ile Leu Thr Pro Ala Ile Ile Arg Gly Ile Ser Leu Ser Lys Cys  
 1 5 10 15  
 Val Met Thr Gly Ser Pro Ser Cys Ser Leu Pro Thr Thr Trp Met Arg  
 20 25 30  
 Leu Asn Gly Trp Leu Ile Thr Ser Gly Ser Ser Ile Ala Ala Gly Ser  
 35 40 45  
 Gln Leu Met Glu Leu Cys Gln Ser Ser Pro Leu Ser Arg Val Trp Lys  
 50 55 60  
 Met Cys Ser Ser Leu Thr Leu Val Thr Ala Gln Gln Gly Gly Ile Asp  
 65 70 75 80  
 Met Thr Thr Leu Asp Leu Arg Pro Ala Pro Gln Ala Ala Pro Ala Ala  
 85 90 95  
 Ala Arg Val Arg Asn His Ala Leu Thr Glu Val Arg Leu Val Met Arg  
 100 105 110  
 Asn Gly Glu Gln Leu Leu Leu Ala Leu Val Ile Pro Ile Gly Ile Ile  
 115 120 125  
 Val Ala Gly Arg Phe Leu Gly Gly Arg Val Gly Leu Thr Met Asp Val  
 130 135 140  
 Leu Ala Pro Ser Val Leu Ala Leu Ala Ile Trp Ser Thr Cys Phe Thr  
 145 150 155 160  
 Ser Gln Ala Ile Met Thr Gly Phe Glu Arg Arg Tyr Gly Val Leu Glu  
 165 170 175  
 Arg Leu Ser Ala Thr Pro Leu Gly Arg Ser Gly Leu Leu Ala Gly Lys  
 180 185 190  
 Ala Met Ala Tyr Ser Val Ile Ser Leu Ala Gln Val Ile Leu Leu Val  
 195 200 205  
 Ile Ile Ser Leu Ala Leu Gly Trp His Pro His Gly Ser Gly Leu Ala  
 210 215 220  
 Trp Leu Pro Thr Leu Val Ser Val Val Leu Ala Met Met Thr Phe Gly  
 225 230 235 240  
 Leu Ala Ala Leu Ala Met Ala Gly Ala Gly Lys Ala Glu Val Thr Leu  
 245 250 255  
 Gly Leu Ala Asn Leu Val Tyr Ile  
 260

<210> 1865  
 <211> 717  
 <212> DNA  
 <213> Homo sapiens

<400> 1865  
 ngccggctga tcaaacaaact cacagacatg ggcttcccgga gagagccagc tgaggaggcc  
 60  
 ttgaagagta acaatatgaa tcttgatcag gccatgagcg ctctgctgga aaagaaggtg  
 120  
 gacgtggaca agcgtgggct gggagtgacc gaccataatg gaatggccgc caagcccctc  
 180

ggctgccgcc cgccaatctc caaagagtct tccgtggacc gccccaccct tcttgacaag  
 240  
 gatggcggcc tcgtggaaga gcccacgcct tcaccgttct tgccttcccc aagcctgaag  
 300  
 ctcccccttt cacacagtgc actccccagt caggccctgg gtgggggttg ctccgggctg  
 360  
 ggcatgcaaa acttgaattc ttctagacag ataccgagtg gcaatctggg tatgtttggc  
 420  
 aatagtggag cagcacaagc caggaccatg cagcagccgc cacagccacc agtgcagcct  
 480  
 cttaactctt cccagcccag tctccgtgct caagtgcctc agtttctatc ccctcaggtt  
 540  
 caagcacagc ttttgcagtt tgcagcaaaa aacattggtc tcaaccctgc actattaacc  
 600  
 tcgccaatta atcctcaaca tatgacgatg ttgaaccagc tctatcagct gcagctggca  
 660  
 taccaacgtt taaaaatcca gcagcagatg ttacaggccc agcgtaatgt gtccgga  
 717

<210> 1866

<211> 239

<212> PRT

<213> Homo sapiens

<400> 1866

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Arg | Leu | Ile | Lys | Gln | Leu | Thr | Asp | Met | Gly | Phe | Pro | Arg | Glu | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ala | Glu | Glu | Ala | Leu | Lys | Ser | Asn | Asn | Met | Asn | Leu | Asp | Gln | Ala | Met |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ser | Ala | Leu | Leu | Glu | Lys | Lys | Val | Asp | Val | Asp | Lys | Arg | Gly | Leu | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Val | Thr | Asp | His | Asn | Gly | Met | Ala | Ala | Lys | Pro | Leu | Gly | Cys | Arg | Pro |
|     | 50  |     |     |     | 55  |     |     |     |     |     | 60  |     |     |     |     |
| Pro | Ile | Ser | Lys | Glu | Ser | Ser | Val | Asp | Arg | Pro | Thr | Leu | Leu | Asp | Lys |
| 65  |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     | 80  |     |
| Asp | Gly | Gly | Leu | Val | Glu | Glu | Pro | Thr | Pro | Ser | Pro | Phe | Leu | Pro | Ser |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Pro | Ser | Leu | Lys | Leu | Pro | Leu | Ser | His | Ser | Ala | Leu | Pro | Ser | Gln | Ala |
|     |     | 100 |     |     |     |     | 105 |     |     |     |     |     | 110 |     |     |
| Leu | Gly | Gly | Val | Ala | Ser | Gly | Leu | Gly | Met | Gln | Asn | Leu | Asn | Ser | Ser |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Arg | Gln | Ile | Pro | Ser | Gly | Asn | Leu | Gly | Met | Phe | Gly | Asn | Ser | Gly | Ala |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Ala | Gln | Ala | Arg | Thr | Met | Gln | Gln | Pro | Pro | Gln | Pro | Pro | Val | Gln | Pro |
| 145 |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     | 160 |     |
| Leu | Asn | Ser | Ser | Gln | Pro | Ser | Leu | Arg | Ala | Gln | Val | Pro | Gln | Phe | Leu |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     |     | 175 |     |
| Ser | Pro | Gln | Val | Gln | Ala | Gln | Leu | Leu | Gln | Phe | Ala | Ala | Lys | Asn | Ile |
|     |     | 180 |     |     |     |     | 185 |     |     |     |     |     | 190 |     |     |
| Gly | Leu | Asn | Pro | Ala | Leu | Leu | Thr | Ser | Pro | Ile | Asn | Pro | Gln | His | Met |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     |     | 205 |     |     |
| Thr | Met | Leu | Asn | Gln | Leu | Tyr | Gln | Leu | Gln | Leu | Ala | Tyr | Gln | Arg | Leu |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Gln | Ile | Gln | Gln | Gln | Met | Leu | Gln | Ala | Gln | Arg | Asn | Val | Ser | Gly |     |

225

230

235

&lt;210&gt; 1867

&lt;211&gt; 518

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1867

nnggggcacg gttagggcca gtgggcagag gggtagggga tatgcaggac cttccactgt  
 60  
 tccatgcatg ggacggcact tgggtccgag atcaggtagc caggcatgga aggaacatgg  
 120  
 gaggaaggga actgtctggt gcgccagtgt tgttcaagga ggatgtgaca agacaggcca  
 180  
 tctggttgge tggccctggt acccaacaac gtggtggcca aggccttggt cccggagagg  
 240  
 ttcttggggg ccagcagggg gctacatagg acatgggtgg ggaccccagc tccgagccca  
 300  
 cctctcctgc ctccaccctt tccaccnng cagccccgc ctctcccgca gaactctccc  
 360  
 caagccagac cgcttgacc ggctgcttaa gtcaggcttt gggacatacc ctgggaggaa  
 420  
 gcgaggtgct ttgcacccc aagtgatcat gttcccgtag ccagcctgcc aaggtagtgt  
 480  
 ggagcttggg gagcgggggc tggcagggct tttccgga  
 518

&lt;210&gt; 1868

&lt;211&gt; 73

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1868

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Asp | Arg | Pro | Ser | Gly | Trp | Leu | Ala | Leu | Leu | Pro | Asn | Asn | Val | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ala | Lys | Ala | Leu | Cys | Pro | Glu | Arg | Phe | Leu | Gly | Ala | Ser | Arg | Gly | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| His | Arg | Thr | Trp | Val | Gly | Thr | Pro | Ala | Pro | Ser | Pro | Pro | Leu | Leu | Pro |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |
| Pro | Pro | Leu | Pro | Pro | Xaa | Gln | Pro | Pro | Pro | Leu | Pro | Gln | Asn | Ser | Pro |
|     |     | 50  |     |     |     | 55  |     |     |     |     |     | 60  |     |     |     |
| Gln | Ala | Arg | Pro | Pro | Gly | Pro | Ala | Ala |     |     |     |     |     |     |     |
| 65  |     |     |     |     | 70  |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 1869

&lt;211&gt; 436

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1869

acgcgtcacc ttctgctgg agctactggg agccctcgga cacctgctg cattgcccga  
 60  
 ccgtgacatg ccgagcaccg aaacccacct gtggattcgc gagctgagcc gcatcgaccg  
 120

cgacgtgtcg actgccaccc actttcgttg gagcgacgac ggcaccgtgc taggtcagac  
 180  
 gaccgacgat ggcaccgagc ctgaggttgt tgccctgcca gcggtctact gccgtcgttg  
 240  
 cggccgcagc ggatggggag tccagctcgc cagcaccggc aataacctca gcgagaacaa  
 300  
 cgacagcatc cgacggaccc acgcggcaca cgacggtcgc ttccgagcct tgctttcggc  
 360  
 ccctcgagag ggagccagcg cggtcgacac cggcgaggcg acactgtcct tacgtgggt  
 420  
 cgacaccgtc aacagg  
 436

<210> 1870

<211> 123

<212> PRT

<213> Homo sapiens

<400> 1870

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Pro | Ser | Thr | Glu | Thr | His | Leu | Trp | Ile | Arg | Glu | Leu | Ser | Arg | Ile |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Asp | Arg | Asp | Val | Ser | Thr | Ala | Thr | His | Phe | Arg | Trp | Ser | Asp | Asp | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Thr | Val | Leu | Gly | Gln | Thr | Thr | Asp | Asp | Gly | Thr | Glu | Pro | Glu | Val | Val |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ala | Leu | Pro | Ala | Val | Tyr | Cys | Arg | Arg | Cys | Gly | Arg | Ser | Gly | Trp | Gly |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Val | Gln | Leu | Ala | Ser | Thr | Gly | Asn | Asn | Leu | Ser | Glu | Asn | Asn | Asp | Ser |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Ile | Arg | Arg | Thr | His | Ala | Ala | His | Asp | Gly | Arg | Phe | Arg | Ala | Leu | Leu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ser | Ala | Pro | Arg | Glu | Gly | Ala | Ser | Ala | Val | Asp | Thr | Gly | Glu | Ala | Thr |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Leu | Ser | Leu | Arg | Trp | Phe | Asp | Thr | Val | Asn | Arg |     |     |     |     |     |
|     |     | 115 |     |     |     |     |     | 120 |     |     |     |     |     |     |     |

<210> 1871

<211> 474

<212> DNA

<213> Homo sapiens

<400> 1871

nntgcagcgc cccgaggtcg atgtctccaa cgtctttgcc agccttgaca tggctagcga  
 60  
 gcccgacctc gtccgtaccc tgctgaggca agcccaacaa tgaccgggga acagctcgcg  
 120  
 cattggatcg aggagtcgac gtcgacggtg tttttcggcg gcgccggaat gtccaccgaa  
 180  
 tcaggtattc cggactttcg ctcggctggc gggctttaca ccactcagca tgacctgccc  
 240  
 ttccccgcgg agtacatgct cagtcacagc tgtttggttg agcatcccgc ggagtcttcc  
 300  
 gacttctacc gcacctacct catccatcct caggccaggc ccaatgctgg tcacgtgcg  
 360

ttggttgccct tggagcaggc tgggggaactt tcgacgatca ttaccagaa tattgacggc  
 420  
 ctgcaccaag aagctgggtc tcgtcaggtc attgagttgc atgggtcggg gcac  
 474

<210> 1872  
 <211> 125  
 <212> PRT  
 <213> Homo sapiens

<400> 1872  
 Met Thr Gly Glu Gln Leu Ala His Trp Ile Glu Glu Ser Thr Ser Thr  
 1 5 10 15  
 Val Phe Phe Gly Gly Ala Gly Met Ser Thr Glu Ser Gly Ile Pro Asp  
 20 25 30  
 Phe Arg Ser Ala Gly Gly Leu Tyr Thr Thr Gln His Asp Leu Pro Phe  
 35 40 45  
 Pro Ala Glu Tyr Met Leu Ser His Ser Cys Leu Val Glu His Pro Ala  
 50 55 60  
 Glu Phe Phe Asp Phe Tyr Arg Thr Tyr Leu Ile His Pro Gln Ala Arg  
 65 70 75 80  
 Pro Asn Ala Gly His Arg Ala Leu Val Ala Leu Glu Gln Ala Gly Glu  
 85 90 95  
 Leu Ser Thr Ile Ile Thr Gln Asn Ile Asp Gly Leu His Gln Glu Ala  
 100 105 110  
 Gly Ser Arg Gln Val Ile Glu Leu His Gly Ser Val His  
 115 120 125

<210> 1873  
 <211> 338  
 <212> DNA  
 <213> Homo sapiens

<400> 1873  
 nacgcgtaga aatgaagccc cagctgggtca gagaccggaa atccggtagt gcacgggacg  
 60  
 gggtccctcg gggatctcgg aggggagacc cccaccggg aggactggag gcagcgcctc  
 120  
 tcccgccccg gcgcgcgcag cctatttccc tctttccaag gggccaatcc ccaccgggc  
 180  
 ccgcaggggg cgcgctcaag gcaagggtccg cggcgagaa ggtgcccagt gggagcgaag  
 240  
 ggcgaggcca gcccttggtc cttggccggc agttcgggtc ccgcctccaa atttttagtat  
 300  
 gcatatgagt caccaggaaa gttttttgaa acaaattt  
 338

<210> 1874  
 <211> 93  
 <212> PRT  
 <213> Homo sapiens

<400> 1874  
 Ser Pro Ser Trp Ser Glu Thr Gly Asn Pro Val Val His Gly Thr Gly

```

      1             5             10             15
Ser Leu Gly Asp Leu Gly Gly Glu Thr Pro Thr Arg Glu Asp Trp Arg
      20             25             30
Gln Arg Leu Ser Arg Pro Gly Ala Arg Ser Leu Phe Pro Ser Phe Gln
      35             40             45
Gly Ala Asn Pro His Arg Gly Pro Gln Gly Ala Arg Ser Arg Gln Gly
      50             55             60
Pro Arg Arg Glu Arg Cys Pro Val Gly Ala Lys Gly Glu Ala Ser Pro
      65             70             75             80
Trp Ser Leu Ala Gly Ser Ser Gly Pro Ala Ser Lys Phe
      85             90

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&lt;210&gt; 1875

&lt;211&gt; 366

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1875

```

aagcttggcg tacaagtggg tcgtcgtttc tcaggtgggtg gagccgtgta tcacgatatg
60
ggcaatatct gcttctgctt cattacagaa gatgatggcg atagcttccg tgattttgga
120
aaattcacag aaccttgat tgaagcactc cataaaatgg gagcaacagg ggcagagtta
180
caaggacgta acgaccttct catcgacgga aagaaattct ctggaaatgc gatgtactca
240
aacaatggcc gtttaacagc gcacggaaca ttaatgttgg atttagatgt gagcattttg
300
ccacaaattt tacgtccaaa acaagagaaa atcgagtcaa aaggaatcaa gtcggttcgt
360
tcacgc
366

```

&lt;210&gt; 1876

&lt;211&gt; 122

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1876

```

Lys Leu Gly Val Gln Val Val Arg Arg Phe Ser Gly Gly Gly Ala Val
      1             5             10             15
Tyr His Asp Met Gly Asn Ile Cys Phe Cys Phe Ile Thr Glu Asp Asp
      20             25             30
Gly Asp Ser Phe Arg Asp Phe Gly Lys Phe Thr Glu Pro Val Ile Glu
      35             40             45
Ala Leu His Lys Met Gly Ala Thr Gly Ala Glu Leu Gln Gly Arg Asn
      50             55             60
Asp Leu Leu Ile Asp Gly Lys Lys Phe Ser Gly Asn Ala Met Tyr Ser
      65             70             75             80
Asn Asn Gly Arg Leu Thr Ala His Gly Thr Leu Met Leu Asp Leu Asp
      85             90             95
Val Ser Ile Leu Pro Gln Ile Leu Arg Pro Lys Gln Glu Lys Ile Glu
      100             105             110
Ser Lys Gly Ile Lys Ser Val Arg Ser Arg

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115

120

<210> 1877  
 <211> 357  
 <212> DNA  
 <213> Homo sapiens

<400> 1877  
 acgcgtgagt ggtcgcaaat atgacgggca agaaacgctt agaaagaaac taccattaa  
 60  
 cgagggttatg caaattgcag aaatctctct atcggattgt ggctatatta tttcatcttt  
 120  
 ccaagctgct ggaccaaggg ctgtagggtt gcaacgacct attatatctg aacatttttt  
 180  
 tcaatttgac ccatttgata aacgacattg ggttgtctca catcatttac cacacgctgc  
 240  
 gacagctgct ttcacttccg gatttgaaga ttgcgctgga ttagtttcag atactgccgg  
 300  
 atcgaacact cttgatggaa aggactatgt tgaaagctgc tgcaatgcta ttccacg  
 357

<210> 1878  
 <211> 96  
 <212> PRT  
 <213> Homo sapiens

<400> 1878  
 Met Gln Ile Ala Glu Ile Ser Leu Ser Asp Cys Gly Tyr Ile Ile Ser  
 1 5 10 15  
 Ser Phe Gln Ala Ala Gly Pro Arg Ala Val Gly Leu Gln Arg Pro Ile  
 20 25 30  
 Ile Ser Glu His Phe Phe Gln Phe Asp Pro Phe Asp Lys Arg His Trp  
 35 40 45  
 Val Val Ser His His Leu Pro His Ala Ala Thr Ala Ala Phe Thr Ser  
 50 55 60  
 Gly Phe Glu Asp Cys Ala Gly Leu Val Ser Asp Thr Ala Gly Ser Asn  
 65 70 75 80  
 Thr Leu Asp Gly Lys Asp Tyr Val Glu Ser Cys Cys Asn Ala Ile Pro  
 85 90 95

<210> 1879  
 <211> 1062  
 <212> DNA  
 <213> Homo sapiens

<400> 1879  
 nacgcgtgga tgctccttgg acggcttttt cgtggtagag ggttcccggg gcgcgcgcga  
 60  
 tccctgggaa gtagctgaag agaaggcaca ggaagagtcg cctccactga tggctcctct  
 120  
 gtccctccca caggctctga cgcccgtctt gcggcttcgg tgtttgaaca ggccacagtc  
 180  
 caggagcgct tacattcagg agctccgcgt agcacctgcc caaccaaact cagccctccg  
 240



ttaagatcct ggttccatgc cgcagtagga cagcaggccc aagtctgcac atcccagtga  
 300  
 tgcaccatgc caatagtgga taagttgaag gaggccctga aaccgggccg caaggactcg  
 360  
 gctgatgatg gagaactggg gaagcttctt gcctcctctg ccaagaaggt ccttttacag  
 420  
 aaaatcgagt tcgagccagc cagcaagagc ttctcctacc agctggaggc cttaaagagc  
 480  
 aaatatgtgt tgctcaaccc caaacagag ggagctagtc gccacaagag tggagatgac  
 540  
 ccaccggcca ggagacaggg cagtgaacac acgtatgaga gctgtggtga cggagtccca  
 600  
 gccccgcaga aagtgtttt cccacaggag cgactgtctc tgaggtggga gcgggtcttc  
 660  
 cgcgtgggcg caggactcca caacctggc aacacctgct ttctcaatgc caccatccag  
 720  
 tgcttgacct acacaccacc tctagccaac tacctgctct ccaaggagca tgctcgcagc  
 780  
 tgccaccagg gaagcttctg catgctgtgt gtcatgcaga accacattgt ccaggccttc  
 840  
 gccaacagcg gcaacgccat caagcccgtc tccttcatcc gagacctgaa aaagatcgcc  
 900  
 cgacatttcc gctttgggaa ccaggaggac gcgcatgagt tcctgcggta caccatcgac  
 960  
 gccatgcaga aagcctgcct gaatggctgt gccaaattgg atcgtcaaac gcaggctact  
 1020  
 accttggtcc atcaaatttt tggagggtat ctcagatcac gc  
 1062

<210> 1880

<211> 252

<212> PRT

<213> Homo sapiens

<400> 1880

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Pro | Ile | Val | Asp | Lys | Leu | Lys | Glu | Ala | Leu | Lys | Pro | Gly | Arg | Lys |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Asp | Ser | Ala | Asp | Asp | Gly | Glu | Leu | Gly | Lys | Leu | Leu | Ala | Ser | Ser | Ala |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Lys | Lys | Val | Leu | Leu | Gln | Lys | Ile | Glu | Phe | Glu | Pro | Ala | Ser | Lys | Ser |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Phe | Ser | Tyr | Gln | Leu | Glu | Ala | Leu | Lys | Ser | Lys | Tyr | Val | Leu | Leu | Asn |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Pro | Lys | Thr | Glu | Gly | Ala | Ser | Arg | His | Lys | Ser | Gly | Asp | Asp | Pro | Pro |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Ala | Arg | Arg | Gln | Gly | Ser | Glu | His | Thr | Tyr | Glu | Ser | Cys | Gly | Asp | Gly |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Val | Pro | Ala | Pro | Gln | Lys | Val | Leu | Phe | Pro | Thr | Glu | Arg | Leu | Ser | Leu |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Arg | Trp | Glu | Arg | Val | Phe | Arg | Val | Gly | Ala | Gly | Leu | His | Asn | Leu | Gly |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Asn | Thr | Cys | Phe | Leu | Asn | Ala | Thr | Ile | Gln | Cys | Leu | Thr | Tyr | Thr | Pro |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Pro | Leu | Ala | Asn | Tyr | Leu | Leu | Ser | Lys | Glu | His | Ala | Arg | Ser | Cys | His |

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145          150          155          160
Gln Gly Ser Phe Cys Met Leu Cys Val Met Gln Asn His Ile Val Gln
          165          170          175
Ala Phe Ala Asn Ser Gly Asn Ala Ile Lys Pro Val Ser Phe Ile Arg
          180          185          190
Asp Leu Lys Lys Ile Ala Arg His Phe Arg Phe Gly Asn Gln Glu Asp
          195          200          205
Ala His Glu Phe Leu Arg Tyr Thr Ile Asp Ala Met Gln Lys Ala Cys
          210          215          220
Leu Asn Gly Cys Ala Lys Leu Asp Arg Gln Thr Gln Ala Thr Thr Leu
225          230          235          240
Val His Gln Ile Phe Gly Gly Tyr Leu Arg Ser Arg
          245          250

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<210> 1881  
 <211> 358  
 <212> DNA  
 <213> Homo sapiens

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<400> 1881
natcaccatg gatggacgcc ggcaaagcaa catcaatcga tgtcaagcca cagacatctc
60
aatccctgc agaaccgcaa agtttggcag agaagaagga tgaatgggag atcgcataca
120
tcaacacgaa gattaacgac gtctacaacc ctctcaacaa caatgtggac tggttaagca
180
cgagaattga tctgctacag caagatttgg acaccactcg caagaaggat ctaaaaccag
240
ccacatcgat cgatatctgc accatcacat cgatcgatag caagttcgta gccatggaag
300
atagggttaca atcttataag gatatgcacg accgtttcac ctcacctatc aggcgata
358

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<210> 1882  
 <211> 115  
 <212> PRT  
 <213> Homo sapiens

```

<400> 1882
Met Asp Ala Gly Lys Ala Thr Ser Ile Asp Val Lys Pro Gln Thr Ser
1          5          10          15
Gln Ile Pro Ala Glu Pro Gln Ser Leu Ala Glu Lys Lys Asp Glu Trp
          20          25          30
Glu Ile Ala Tyr Ile Asn Thr Lys Ile Asn Asp Val Tyr Asn Pro Leu
          35          40          45
Asn Asn Asn Val Asp Trp Leu Ser Thr Arg Ile Asp Leu Leu Gln Gln
          50          55          60
Asp Leu Asp Thr Thr Arg Lys Lys Asp Leu Lys Pro Ala Thr Ser Ile
65          70          75          80
Asp Ile Cys Thr Ile Thr Ser Ile Asp Ser Lys Phe Val Ala Met Glu
          85          90          95
Asp Arg Leu Gln Ser Tyr Lys Asp Met His Asp Arg Phe Thr Ser Pro
100          105          110
Ile Arg Arg

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115

<210> 1883  
 <211> 367  
 <212> DNA  
 <213> Homo sapiens

<400> 1883  
 ggatcctatc atgaatctgc actctgacca gggaagtaac tcccttggct gctcagactt  
 60  
 gggctgggag aatgatacta agacaccaga catcacatcc attgctccca tccccactat  
 120  
 tgctgaaggc gatgagtctg tatttgtcaa ctccaattca aacagctcga tggcgcctcc  
 180  
 tgtcctggag aacaatgctg ttgatctcac tgatgggctg acagatttgg aatcctatat  
 240  
 gaggtttctt atggatggcg gngcaagtga ttcaattgat agccttctga accttgatgg  
 300  
 atcacaggat cttggttagca atatggacct ctggaccttc gatgacatgc ccacgcgtgg  
 360  
 cgatttn  
 367

<210> 1884  
 <211> 119  
 <212> PRT  
 <213> Homo sapiens

<400> 1884  
 Met Asn Leu His Ser Asp Gln Gly Ser Asn Ser Leu Gly Cys Ser Asp  
 1 5 10 15  
 Leu Gly Trp Glu Asn Asp Thr Lys Thr Pro Asp Ile Thr Ser Ile Ala  
 20 25 30  
 Pro Ile Pro Thr Ile Ala Glu Gly Asp Glu Ser Val Phe Val Asn Ser  
 35 40 45  
 Asn Ser Asn Ser Ser Met Val Pro Pro Val Leu Glu Asn Asn Ala Val  
 50 55 60  
 Asp Leu Thr Asp Gly Leu Thr Asp Leu Glu Ser Tyr Met Arg Phe Leu  
 65 70 75 80  
 Met Asp Gly Gly Ala Ser Asp Ser Ile Asp Ser Leu Leu Asn Leu Asp  
 85 90 95  
 Gly Ser Gln Asp Leu Gly Ser Asn Met Asp Leu Trp Thr Phe Asp Asp  
 100 105 110  
 Met Pro Ile Ala Gly Asp Xaa  
 115

<210> 1885  
 <211> 392  
 <212> DNA  
 <213> Homo sapiens

<400> 1885  
 nacgcgtatt cgcaaagaat gtctttgcgg cacagagaca gtcgtcgtcc tcgacaccat  
 60

gttcgacgat ctccgcatgt tgggaacccg gtgatttctc gcctgcggcg cacctcgtgg  
 120  
 ctgcgtagta cagctgctgt tgccgccggg gccgcgaccg gtaccggggt ccaaccactg  
 180  
 aactgggtgga tcctcgatcat tcccgggtctc gctgcgctca tcctgctggt gcgcaacgcc  
 240  
 actgggtcggg ccgcggcagg actgggggtat ctcttcggca tcgggtctgtt taccaccacc  
 300  
 atttcctggg taggcgtcat cggccccccg gtggcgatac ttctcatcgc tgtcatggcg  
 360  
 ttgtggtgtc tgctggccgg gtggacgatt cg  
 392

<210> 1886  
 <211> 130  
 <212> PRT  
 <213> Homo sapiens

<400> 1886  
 Xaa Ala Tyr Ser Gln Arg Met Ser Leu Arg His Arg Asp Ser Arg Arg  
 1 5 10 15  
 Pro Arg His His Val Arg Arg Ser Arg His Val Gly Asn Pro Val Ile  
 20 25 30  
 Ser Arg Leu Arg Arg Thr Ser Trp Leu Arg Ser Thr Ala Ala Val Ala  
 35 40 45  
 Ala Gly Ala Ala Thr Gly Thr Gly Phe Gln Pro Leu Asn Trp Trp Ile  
 50 55 60  
 Leu Val Ile Pro Gly Leu Ala Ala Leu Ile Leu Leu Val Arg Asn Ala  
 65 70 75 80  
 Thr Gly Arg Ala Ala Ala Gly Leu Gly Tyr Leu Phe Gly Ile Gly Leu  
 85 90 95  
 Phe Thr Thr Thr Ile Ser Trp Val Gly Val Ile Gly Pro Pro Val Ala  
 100 105 110  
 Ile Leu Leu Ile Ala Val Met Ala Leu Trp Cys Leu Leu Ala Gly Trp  
 115 120 125  
 Thr Ile  
 130

<210> 1887  
 <211> 363  
 <212> DNA  
 <213> Homo sapiens

<400> 1887  
 cgcgagttca ttcggacctt tgaggacgtt gccaaagctc tcaatgggga ccagccgatc  
 60  
 gacttcttgg tgcagggaac tttatatccc gatgtcgtcg agtctggtgg cggtaggggc  
 120  
 gctgcccaata tcaagagtca ccataatggt ggtgggctcc ctgacgacct ccagttcagt  
 180  
 ctcggtgagc cattgcgcac cctctttaag gacgaggtgc gagccgtcgg actcgaactt  
 240  
 ggtctgcccc aggacatcgt ctggcgctcag cccttcccgg gcccggggct ggctatccgc  
 300

attattggcg aagtcaccgc ggagcgtctg gaggtgctac gcactgccga tgccatcacg  
 360  
 cgt  
 363

<210> 1888  
 <211> 121  
 <212> PRT  
 <213> Homo sapiens

<400> 1888  
 Arg Glu Phe Ile Arg Thr Phe Glu Asp Val Ala Lys Arg Leu Asn Gly  
 1 5 10 15  
 Asp Gln Pro Ile Asp Phe Leu Val Gln Gly Thr Leu Tyr Pro Asp Val  
 20 25 30  
 Val Glu Ser Gly Gly Gly Glu Gly Ala Ala Asn Ile Lys Ser His His  
 35 40 45  
 Asn Val Gly Gly Leu Pro Asp Asp Leu Gln Phe Ser Leu Val Glu Pro  
 50 55 60  
 Leu Arg Thr Leu Phe Lys Asp Glu Val Arg Ala Val Gly Leu Glu Leu  
 65 70 75 80  
 Gly Leu Pro Glu Asp Ile Val Trp Arg Gln Pro Phe Pro Gly Pro Gly  
 85 90 95  
 Leu Ala Ile Arg Ile Ile Gly Glu Val Thr Ala Glu Arg Leu Glu Val  
 100 105 110  
 Leu Arg Thr Ala Asp Ala Ile Thr Arg  
 115 120

<210> 1889  
 <211> 530  
 <212> DNA  
 <213> Homo sapiens

<400> 1889  
 gcaccagatc tgctcatggc gcgcattgcg acggcaacgc agtcgatccg gcttgggtct  
 60  
 ggtgggggtga tggccatgca ctacgggtcg ctgcaaatac cggaacgggtt ttcgaccctc  
 120  
 acagcgctct tcggtgatcg tatcgacatg gggctggggc gggctcccgg cggtgacatg  
 180  
 ctctccgccc atgccctcaa tcaggggcag gtcattccgc ctgaggccat taattccctc  
 240  
 atcgccgaaa cggtaggggt cgtgcgcgaa atgctaccgt cgaagcatcc gtacgcaaag  
 300  
 gtcgtcgtga ccccggcagg tcagatccag ccacagacgt ggctgctggg atcgtcgggc  
 360  
 cagtcagcag cgtgggctgg tgagcagggt atggactacg cctacgccca gtttttcacc  
 420  
 gggcgccagg acaccgggat catggatcac taccgcgcgc acctgtccga cggcttcccc  
 480  
 ggcaggaccc tctcagcagt gtgtgtatcg gctgctccga cgcgtccgga  
 530

<210> 1890

<211> 176  
 <212> PRT  
 <213> Homo sapiens

<400> 1890

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Pro | Asp | Leu | Leu | Met | Ala | Arg | Ile | Ala | Thr | Ala | Thr | Gln | Ser | Ile |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Arg | Leu | Gly | Ser | Gly | Gly | Val | Met | Ala | Met | His | Tyr | Gly | Ser | Leu | Gln |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ile | Ala | Glu | Arg | Phe | Ser | Thr | Leu | Thr | Ala | Leu | Phe | Gly | Asp | Arg | Ile |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Asp | Met | Gly | Leu | Gly | Arg | Ala | Pro | Gly | Gly | Asp | Met | Leu | Ser | Ala | His |
|     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |
| Ala | Leu | Asn | Gln | Gly | Gln | Val | Ile | Arg | Pro | Glu | Ala | Ile | Asn | Ser | Leu |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Ile | Ala | Glu | Thr | Val | Gly | Phe | Val | Arg | Glu | Met | Leu | Pro | Ser | Lys | His |
|     |     |     |     | 85  |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Pro | Tyr | Ala | Lys | Val | Val | Val | Thr | Pro | Ala | Gly | Gln | Ile | Gln | Pro | Gln |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     | 110 |     |     |     |
| Thr | Trp | Leu | Leu | Gly | Ser | Ser | Gly | Gln | Ser | Ala | Ala | Trp | Ala | Gly | Glu |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Gln | Gly | Met | Asp | Tyr | Ala | Tyr | Ala | Gln | Phe | Phe | Thr | Gly | Arg | Gln | Asp |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Thr | Gly | Ile | Met | Asp | His | Tyr | Arg | Ala | His | Leu | Ser | Asp | Gly | Phe | Pro |
| 145 |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |     |
| Gly | Arg | Thr | Leu | Ser | Ala | Val | Cys | Val | Ser | Ala | Ala | Pro | Thr | Arg | Pro |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     |     | 175 |     |

<210> 1891  
 <211> 423  
 <212> DNA  
 <213> Homo sapiens

<400> 1891

agatctcagg gagacagagg ggcccgggat aggaagaata tgtgggcacc tctcccacag  
 60  
 tcctccatct gcacaaggct acccactctg cagatggccc ctgcttgag agagatccag  
 120  
 cgtcaattta cagaggcagc ccagcttctt atcaactttc tggcctgggt taacgggtgta  
 180  
 atgggcaggg ggcaaggcct tgaccacact catgtttctc ccccggcctc ctccactctg  
 240  
 ggattttgta ccggtatggg gaggcactac ggttgagat ttagcttttc agcgtggata  
 300  
 caagcaccca agtgtcccag accacagcag aaaccgtgtt gctgccgttt ccaacctgct  
 360  
 gatttggctc cttgctgccg ttctgaccaa cagaattgct actgactgac aaatcccttg  
 420  
 tgc  
 423

<210> 1892  
 <211> 121  
 <212> PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1892

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Met Trp Ala Pro Leu Pro Gln Ser Ser Ile Cys Thr Arg Leu Pro Thr
 1           5           10           15
Leu Gln Met Ala Pro Ala Cys Arg Glu Ile Gln Arg Gln Phe Thr Glu
      20           25           30
Ala Ala Gln Leu Pro Ile Asn Phe Leu Ala Trp Leu Asn Gly Val Met
      35           40           45
Gly Arg Gly Gln Gly Leu Asp His Thr His Val Ser Pro Pro Ala Ser
      50           55           60
Ser Thr Leu Gly Phe Cys Thr Gly Met Gly Arg His Tyr Gly Cys Arg
      65           70           75           80
Phe Ser Phe Ser Ala Trp Ile Gln Ala Pro Lys Cys Pro Arg Pro Gln
      85           90           95
Gln Lys Pro Cys Cys Cys Arg Phe Gln Pro Ala Asp Leu Val Ser Cys
      100          105          110
Cys Arg Ser Asp Gln Gln Asn Cys Tyr
      115          120

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&lt;210&gt; 1893

&lt;211&gt; 886

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1893

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accggtggtg ctgaaccggc ccgagttgcc cttcctagcc ggatatacgt cgagggacgt
60
catgacgctg aactcgtcga aaagatatgg ggcgacgacc tgcgccacgt cggggtcggt
120
gtggaataca tgggtggcat ggacgacctc gtcgggatcg tcgccgagtt taagcctggt
180
ccggggcatc gccttggcgt gttggttgac cacctcgttg ccgacaccaa agagtcacgg
240
gtagcggacg aagtacgtcg tggtaggtat agcgagtatg tcatgattac cggtcacg
300
tttattgaca tctggcaggc catcaaacct caacgaattg gccgtcaaga atggcctgag
360
gtccccgatg acgaagactt caaactcggc accctgaagc gtctgggcct gcctcactcg
420
acccaagctg acgtcggtaa ggctggcag gccatgctgg cagcagtgcg cgactggcac
480
gatttagacc cccgctttaa cacggagatg gagaaactta tcgatttcgt cacgcgtgac
540
catgtcgacg agctggacaa tggggagatg gcatgagtat tgacgtcgac acggtgtctg
600
acctcatccg ggatgtgagt gccagggta tcgatccccg gttccggacc ctccacgac
660
atcaaatacca ccagaaaaag cccggggact tcgttactga tgccgatcgt caggccgagt
720
gcgagctggg tgccgctgtg accaagtatg ccggcggtat tgcgtggggg gaggaatcag
780
ccttcgccga cccaaccatc cttgatgccg tttccgatgc tgacctggcc tgggtcatcg
840

```

acccattga tggcactaag aacttcgtgc acgggtctgt tgatca  
886

<210> 1894  
<211> 191  
<212> PRT  
<213> Homo sapiens

<400> 1894  
Thr Gly Gly Ala Glu Pro Ala Arg Val Ala Leu Pro Ser Arg Ile Tyr  
1 5 10 15  
Val Glu Gly Arg His Asp Ala Glu Leu Val Glu Lys Ile Trp Gly Asp  
20 25 30  
Asp Leu Arg His Val Gly Val Val Glu Tyr Met Gly Gly Met Asp  
35 40 45  
Asp Leu Val Gly Ile Val Ala Glu Phe Lys Pro Gly Pro Gly His Arg  
50 55 60  
Leu Gly Val Leu Val Asp His Leu Val Ala Asp Thr Lys Glu Ser Arg  
65 70 75 80  
Val Ala Asp Glu Val Arg Arg Gly Gly Tyr Ser Glu Tyr Val Met Ile  
85 90 95  
Thr Gly His Arg Phe Ile Asp Ile Trp Gln Ala Ile Lys Pro Gln Arg  
100 105 110  
Ile Gly Arg Gln Glu Trp Pro Glu Val Pro Met Asp Glu Asp Phe Lys  
115 120 125  
Leu Gly Thr Leu Lys Arg Leu Gly Leu Pro His Ser Thr Gln Ala Asp  
130 135 140  
Val Gly Lys Ala Trp Gln Ala Met Leu Ala Arg Val Arg Asp Trp His  
145 150 155 160  
Asp Leu Asp Pro Arg Phe Asn Thr Glu Met Glu Lys Leu Ile Asp Phe  
165 170 175  
Val Thr Arg Asp His Val Asp Glu Leu Asp Asn Gly Glu Met Ala  
180 185 190

<210> 1895  
<211> 2555  
<212> DNA  
<213> Homo sapiens

<400> 1895  
nntcatgatt tttggaggtg ggttgtagct cctgaacttc tagctttcaa gttgtggctg  
60  
ttttttgttt ttgtttttgt tttgtttttc tttagaattt ttcctgttt cccaccttct  
120  
cttccctgtg tgccaagggtc taactcactg tagtctggat gtgggtgtat gttcatgtac  
180  
acaacttttag aaagttgctt gcagaacaaa aaggctacac aaaagcccac tggctctcaa  
240  
tacctcaag tggatggcag aggtctttgt tgaaagtggg caatttgcaa tctttgcatt  
300  
aggatttcag atgcatgccca ggtttccact gattgccaga actcgagatc actacacatg  
360  
gatcccaaaa atcaacatgg cagtggcagt tcgttagttg tgatccagca gccttctttg  
420



gatagccgctc agagattaga ctatgagaga gagattcagc ctactgctat tttgtcctta  
480  
gaccagatca aggccataag aggcagcaat gaatacacag aagggccttc ggtggtgaaa  
540  
agacctgctc ctccgacagc accaagacaa gaaaagcatg aaaggactca tgaaatcata  
600  
ccaattaatg tgaataataa ctacgagcac agacacacaa gccacctggg acatgcagta  
660  
ctcccaagta atgccagggg ccccatTTtg agcagatcaa ccagcactgg aagtgcagcc  
720  
agctctggga gcaacagcag tgcctcttct gaacagggac tgtaggaag gtcaccacca  
780  
accagaccag tccctgggtca taggtctgaa agggcaatcc ggacctcagcc caagcaactg  
840  
attgtggatg acttgaaggg ttccttgaaa gaggacctga cacagcacia gtTcatttTg  
900  
gaacagtgtg ggaagtgcaa gtgtggagaa tgcactgctc ccaggacctt accatcctgt  
960  
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2040

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<210> 1896  
 <211> 139  
 <212> PRT  
 <213> Homo sapiens

<400> 1896  
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 35 40 45  
 Phe Tyr His Cys Ser Asn Asp Asp Glu Gly Asp Ser Tyr Ser Asp Asn  
 50 55 60  
 Pro Cys Ser Cys Ser Gln Ser His Cys Cys Ser Arg Tyr Leu Cys Met  
 65 70 75 80  
 Gly Ala Met Ser Leu Phe Leu Pro Cys Leu Leu Cys Tyr Pro Pro Ala  
 85 90 95  
 Lys Gly Cys Leu Lys Leu Cys Arg Arg Cys Tyr Asp Trp Ile His Arg  
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<210> 1897  
 <211> 938  
 <212> DNA  
 <213> Homo sapiens

<400> 1897  
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 938

<210> 1898

<211> 312

<212> PRT

<213> Homo sapiens

<400> 1898

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | His | Gly | Cys | Tyr | Val | Cys | Gly | Lys | Ser | Phe | Ala | Trp | Arg | Ser | Thr |
| 1   |     |     | 5   |     |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Leu | Val | Glu | His | Val | Tyr | Ser | His | Thr | Gly | Glu | Lys | Pro | Phe | His | Cys |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Thr | Asp | Cys | Gly | Lys | Gly | Phe | Gly | His | Ala | Ser | Ser | Leu | Ser | Lys | His |
|     | 35  |     |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Arg | Ala | Ile | His | Arg | Gly | Glu | Arg | Pro | His | Arg | Cys | Leu | Glu | Cys | Gly |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Arg | Ala | Phe | Thr | Gln | Arg | Ser | Ala | Leu | Thr | Ser | His | Leu | Arg | Val | His |
| 65  |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     | 80  |     |
| Thr | Gly | Glu | Lys | Pro | Tyr | Gly | Cys | Ala | Asp | Cys | Gly | Arg | Arg | Phe | Ser |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Gln | Ser | Ser | Ala | Leu | Tyr | Gln | His | Arg | Arg | Val | His | Ser | Gly | Glu | Thr |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Pro | Phe | Pro | Cys | Pro | Asp | Cys | Gly | Arg | Ala | Phe | Ala | Tyr | Pro | Ser | Asp |
|     | 115 |     |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Leu | Arg | Arg | His | Val | Arg | Ile | His | Thr | Gly | Glu | Lys | Pro | Tyr | Pro | Cys |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Pro | Asp | Cys | Gly | Arg | Arg | Phe | Ser | Ser | Ser | Ser | Leu | Leu | Val | Ser | His |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |
| Arg | Arg | Ala | His | Ser | Gly | Glu | Cys | Pro | Tyr | Val | Cys | Asp | Gln | Cys |
|     |     |     |     |     | 165 |     |     |     | 170 |     |     |     |     | 175 |
| Lys | Arg | Phe | Ser | Gln | Arg | Lys | Asn | Leu | Ser | Gln | His | Gln | Val | Ile |
|     |     |     |     | 180 |     |     |     | 185 |     |     |     |     | 190 |     |
| Thr | Gly | Glu | Lys | Pro | Tyr | His | Cys | Pro | Asp | Cys | Gly | Arg | Cys | Phe |
|     |     | 195 |     |     |     |     | 200 |     |     |     | 205 |     |     |     |
| Arg | Ser | Arg | Ser | Leu | Ala | Asn | His | Arg | Thr | Thr | His | Thr | Gly | Glu |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     | Lys |
| Pro | His | Gln | Cys | Pro | Ser | Cys | Gly | Arg | Arg | Phe | Ala | Tyr | Pro | Ser |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     | 240 |
| Leu | Ala | Ser | His | Arg | Arg | Val | His | Ser | Gly | Glu | Arg | Pro | Tyr | Ala |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |
| Asp | Leu | Cys | Ser | Lys | Arg | Phe | Ala | Gln | Trp | Ser | His | Leu | Ala | Gln |
|     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 | His |
| Gln | Leu | Leu | His | Thr | Gly | Glu | Lys | Pro | Phe | Pro | Cys | Leu | Glu | Cys |
|     | 275 |     |     |     |     |     | 280 |     |     |     |     | 285 |     | Gly |
| Arg | Ala | Ser | Ala | Arg | Gly | Gly | Leu | Trp | Leu | Ser | Thr | Ser | Val | Ala |
|     | 290 |     |     |     |     | 295 |     |     |     |     | 300 |     |     | Pro |
| Arg | Pro | Gln | Thr | Val | Ala | Leu | Asp |     |     |     |     |     |     |     |
| 305 |     |     |     |     | 310 |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 1899

&lt;211&gt; 508

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1899

```

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420
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480
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508

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&lt;210&gt; 1900

&lt;211&gt; 79

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1900

```

Lys Phe Ala Ser Leu Ile Gly Lys Val Gln Ala Leu Glu Gln Arg Asp

```

```

      1           5           10           15
Gln Leu Leu Glu Thr Arg Trp Ser Phe Leu Gln Gly Gln Asp Ser Ala
      20           25           30
Ile Phe Asp Leu Gly His Leu Tyr Glu Glu Ile Ser Gly Arg Leu Arg
      35           40           45
Arg Glu Leu Gly Gln Arg Asp Arg Asn Arg Gly Gln Leu Glu Ala Thr
      50           55           60
Leu Leu Gln Val Leu Lys Lys Val Glu Glu Phe Arg Ile Arg Tyr
      65           70           75

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<210> 1901  
 <211> 453  
 <212> DNA  
 <213> Homo sapiens

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<400> 1901
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240
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300
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360
cgctcaccga ttccatcgcc gacgagggca acgcttagcg acgccagcgc caccgagttt
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453

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<210> 1902  
 <211> 151  
 <212> PRT  
 <213> Homo sapiens

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<400> 1902
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      20           25           30
Ser Ser Thr Arg Ser Ser Arg Ala Arg Asn Ser Thr Arg Ser Ala Pro
      35           40           45
Pro Cys Ser Ser Thr Gly Ala Pro Ser Ser Thr Thr Arg Ile Arg Ala
      50           55           60
Arg Ser Gly Arg Ser Thr Val Ser Ala Ala Thr Arg Ser Pro Ala Ala
      65           70           75           80
Arg Pro Arg Ser Ser Arg Arg Ser Pro Pro Trp Ser Thr Thr Pro Arg
      85           90           95
Arg Arg Ser Ala Ala Arg Gly Arg Ala Leu Thr Cys Ala Asn Gly Ala
      100          105          110
Cys Thr Gly Arg Thr Trp Trp Lys Arg Ser Pro Ile Pro Ser Pro Thr

```

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     | 115 |     | 120 |     | 125 |     |     |     |     |     |     |     |     |     |     |
| Arg | Ala | Thr | Leu | Ser | Asp | Ala | Ser | Ala | Thr | Glu | Phe | Arg | Glu | Met | Lys |
|     | 130 |     |     |     | 135 |     |     |     |     |     |     | 140 |     |     |     |
| Glu | Ile | Leu | Ile | Glu | Gly | Gly |     |     |     |     |     |     |     |     |     |
| 145 |     |     |     |     | 150 |     |     |     |     |     |     |     |     |     |     |

<210> 1903  
 <211> 531  
 <212> DNA  
 <213> Homo sapiens

<400> 1903  
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 120  
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 180  
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 240  
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 300  
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 360  
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 420  
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 531

<210> 1904  
 <211> 133  
 <212> PRT  
 <213> Homo sapiens

<400> 1904  
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 Ile Thr Trp Arg Arg Pro Gln Arg Ile Cys Ala Asn Pro Arg Leu Phe  
 35 40 45  
 Pro Asn Asp Gln Arg Glu Gly Gln Val Lys Gln Gly Leu Leu Gly Asp  
 50 55 60  
 Cys Trp Phe Leu Cys Ala Cys Ala Ala Leu Gln Lys Ser Arg His Leu  
 65 70 75 80  
 Leu Asp Gln Val Ile Pro Ala Gly Gln Pro Ser Trp Ala Asp Gln Glu  
 85 90 95  
 Tyr Arg Gly Ser Phe Thr Cys Arg Phe Trp Gln Phe Gly Arg Trp Val  
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 Glu Gly Pro Trp Val Pro Ser Ser Pro Cys Gly Arg Gly Arg Trp Arg  
 115 120 125  
 Met Pro Trp Trp Thr

130

<210> 1905  
 <211> 387  
 <212> DNA  
 <213> Homo sapiens

<400> 1905  
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 180  
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 240  
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<210> 1906  
 <211> 129  
 <212> PRT  
 <213> Homo sapiens

<400> 1906  
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 Arg Arg Val Leu Leu Ala Ser Phe Leu Leu Ala Ala Val Arg Trp Leu  
 35 40 45  
 Leu Leu Gly Ala Leu Ala Asp His Leu Ala Val Leu Leu Phe Ala Gln  
 50 55 60  
 Val Leu His Ala Ala Thr Phe Ala Ser Phe His Ala Ser Ala Ile His  
 65 70 75 80  
 Phe Val Gln Arg Ser Phe Gly Ala Arg Xaa Ala Arg Pro Gly Gln Ala  
 85 90 95  
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 115 120 125  
 Val

<210> 1907  
 <211> 333  
 <212> DNA  
 <213> Homo sapiens

<400> 1907

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 120  
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 180  
 acgccgatcg tcggccgcac gccggtgtcg aacctgttcc tgaacaccgg ccacggcacg  
 240  
 ctcggctgga caatggtgtg cggctcgggc caactgctcg ccgacctgat ctcgggcaag  
 300  
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 333

<210> 1908  
 <211> 111  
 <212> PRT  
 <213> Homo sapiens

<400> 1908  
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 20 25 30  
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 35 40 45  
 Phe Trp Thr Gly Leu Arg Pro Met Thr Pro Asp Gly Thr Pro Ile Val  
 50 55 60  
 Gly Arg Thr Pro Val Ser Asn Leu Phe Leu Asn Thr Gly His Gly Thr  
 65 70 75 80  
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<210> 1909  
 <211> 2767  
 <212> DNA  
 <213> Homo sapiens

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 420



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aaggctgtcg ccatgtcgaa aaggatatgt tccgaccggc gtttagccga gctctctgat  
1920  
taccgcccgt tatcagagtc gcagctttcg ttccgcccgt cgcgacaaa gtcctcgctg  
1980  
gattaccgtc gcctgcccga tgcccattcc gattacgcac gctattcggg ctccataat  
2040

gattacctgc gggcggctca gatgcactct ggctaccagc gccgcatgta gggccatcct  
 2100  
 gggatggggc accacagggg gggagggaga aaagaggtgg gtaggggttac agatccaggt  
 2160  
 tataactact ctggcccata cctttcctgg ttgtgggttt tcatgccctc taccatgtgg  
 2220  
 gccttcccca ggagatgatc ctgttaagtg ttcggcagta acctactttg ttccttcgcc  
 2280  
 tcagcagcaa atcttgctac tggtctaga tctgcggttt cccctctacc ctgcctcctg  
 2340  
 tctccccaga atgggaattt cttttatgtt tttatttttt tcttggtccc cttttatttt  
 2400  
 tgtgcgcgat atttaaggtc gtctggatgg ggaagcaacc tgcagctgag gtcgccggcg  
 2460  
 cctttttctt tttagatggg aaggaggcca ggaaagggc agcttaacca tttcctatgt  
 2520  
 gccaaagtgt gccagcagtc cagggtaccc tgactgtccc tctgtagact gttgagactg  
 2580  
 agttcctgtt gggacagtca gttggtatgt atccaagtcc ctgctgacca ctaatgttct  
 2640  
 agctgatggg gagcggcaca gtccacttc cccatctccc caagtaggtg gtggttagaaa  
 2700  
 accttaattt tttttccctt ttgtatggac tacaaataaa acttggggca atttgagtt  
 2760  
 tggaaaa  
 2767

&lt;210&gt; 1910

&lt;211&gt; 669

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1910

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Lys | Ile | Phe | Val | Gly | Asn | Val | Asp | Gly | Ala | Asp | Thr | Thr | Pro | Glu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Glu | Leu | Ala | Ala | Leu | Phe | Ala | Pro | Tyr | Gly | Thr | Val | Met | Ser | Cys | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Val | Met | Lys | Gln | Phe | Ala | Phe | Val | His | Met | Arg | Glu | Asn | Ala | Gly | Ala |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Leu | Arg | Ala | Ile | Glu | Ala | Leu | His | Gly | His | Glu | Leu | Arg | Pro | Gly | Arg |
|     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |
| Ala | Leu | Val | Val | Glu | Met | Ser | Arg | Pro | Arg | Pro | Leu | Asn | Thr | Trp | Lys |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Ile | Phe | Val | Gly | Asn | Val | Ser | Ala | Ala | Cys | Thr | Ser | Gln | Glu | Leu | Arg |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Ser | Leu | Phe | Glu | Arg | Arg | Gly | Arg | Val | Ile | Glu | Cys | Asp | Val | Val | Lys |
|     |     | 100 |     |     |     |     | 105 |     |     |     |     |     | 110 |     |     |
| Asp | Tyr | Ala | Phe | Val | His | Met | Glu | Lys | Glu | Ala | Asp | Ala | Lys | Ala | Ala |
|     | 115 |     |     |     |     | 120 |     |     |     | 125 |     |     |     |     |     |
| Ile | Ala | Gln | Leu | Asn | Gly | Lys | Glu | Val | Lys | Gly | Lys | Arg | Ile | Asn | Val |
|     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |     |
| Glu | Leu | Ser | Thr | Lys | Gly | Gln | Lys | Lys | Gly | Pro | Gly | Leu | Ala | Val | Gln |
| 145 |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |     |
| Ser | Gly | Asp | Lys | Thr | Lys | Lys | Pro | Gly | Ala | Gly | Asp | Thr | Ala | Phe | Pro |

165 170 175  
 Gly Thr Gly Gly Phe Ser Ala Thr Phe Asp Tyr Gln Gln Ala Phe Gly  
 180 185 190  
 Asn Ser Thr Gly Gly Phe Asp Gly Gln Ala Arg Gln Pro Thr Pro Pro  
 195 200 205  
 Phe Phe Gly Arg Asp Arg Ser Pro Leu Arg Arg Ser Pro Pro Arg Ala  
 210 215 220  
 Ser Tyr Val Ala Pro Leu Thr Ala Gln Pro Ala Thr Tyr Arg Ala Gln  
 225 230 235 240  
 Pro Ser Val Ser Leu Gly Ala Ala Tyr Arg Ala Gln Pro Ser Ala Ser  
 245 250 255  
 Leu Gly Val Gly Tyr Arg Thr Gln Pro Met Thr Ala Gln Ala Ala Ser  
 260 265 270  
 Tyr Arg Ala Gln Pro Ser Val Ser Leu Gly Ala Pro Tyr Arg Gly Gln  
 275 280 285  
 Leu Ala Ser Pro Ser Ser Gln Ser Ala Ala Ala Ser Ser Leu Gly Pro  
 290 295 300  
 Tyr Gly Gly Ala Gln Pro Ser Ala Ser Ala Leu Ser Ser Tyr Gly Gly  
 305 310 315 320  
 Gln Ala Ala Ala Ala Ser Ser Leu Asn Ser Tyr Gly Ala Gln Gly Ser  
 325 330 335  
 Ser Leu Ala Ser Tyr Gly Asn Gln Pro Ser Ser Tyr Gly Ala Gln Ala  
 340 345 350  
 Ala Ser Ser Tyr Gly Val Arg Ala Ala Ala Ser Ser Tyr Asn Thr Gln  
 355 360 365  
 Gly Ala Ala Ser Ser Leu Gly Ser Tyr Gly Ala Gln Ala Ala Ser Tyr  
 370 375 380  
 Gly Ala Gln Ser Ala Ala Ser Ser Leu Ala Tyr Gly Ala Gln Ala Ala  
 385 390 395 400  
 Ser Tyr Asn Ala Gln Pro Ser Ala Ser Tyr Asn Ala Gln Ser Ala Pro  
 405 410 415  
 Tyr Ala Ala Gln Gln Ala Ala Ser Tyr Ser Ser Gln Pro Ala Ala Tyr  
 420 425 430  
 Val Ala Gln Pro Ala Thr Ala Ala Ala Tyr Ala Ser Gln Pro Ala Ala  
 435 440 445  
 Tyr Ala Ala Gln Ala Thr Thr Pro Met Ala Gly Ser Tyr Gly Ala Gln  
 450 455 460  
 Pro Val Val Gln Thr Gln Leu Asn Ser Tyr Gly Ala Gln Ala Ser Met  
 465 470 475 480  
 Gly Leu Ser Gly Ser Tyr Gly Ala Gln Ser Ala Ala Ala Ala Thr Gly  
 485 490 495  
 Ser Tyr Gly Ala Ala Ala Ala Tyr Gly Ala Gln Pro Ser Ala Thr Leu  
 500 505 510  
 Ala Ala Pro Tyr Arg Thr Gln Ser Ser Ala Ser Leu Ala Ala Ser Tyr  
 515 520 525  
 Ala Ala Gln Gln His Pro Gln Ala Ala Ala Ser Tyr Arg Gly Gln Pro  
 530 535 540  
 Gly Asn Ala Tyr Asp Gly Ala Gly Gln Pro Ser Ala Ala Tyr Leu Ser  
 545 550 555 560  
 Met Ser Gln Gly Ala Val Ala Asn Ala Asn Ser Thr Pro Pro Pro Tyr  
 565 570 575  
 Glu Arg Thr Arg Leu Ser Pro Pro Arg Ala Ser Tyr Asp Asp Pro Tyr  
 580 585 590  
 Lys Lys Ala Val Ala Met Ser Lys Arg Tyr Gly Ser Asp Arg Arg Leu

595                      600                      605  
 Ala Glu Leu Ser Asp Tyr Arg Arg Leu Ser Glu Ser Gln Leu Ser Phe  
 610                      615                      620  
 Arg Arg Ser Pro Thr Lys Ser Ser Leu Asp Tyr Arg Arg Leu Pro Asp  
 625                      630                      635                      640  
 Ala His Ser Asp Tyr Ala Arg Tyr Ser Gly Ser Tyr Asn Asp Tyr Leu  
 645                      650                      655  
 Arg Ala Ala Gln Met His Ser Gly Tyr Gln Arg Arg Met  
 660                      665

<210> 1911  
 <211> 339  
 <212> DNA  
 <213> Homo sapiens

<400> 1911  
 ncggggtggc cggaatctac tctagtgtc cagcttcct cctcttctgt cttccctcg  
 60  
 ggtgcgcgga tgcgtttgcg cccctgctg cggtccgacg gtcattgagt gggcgctcag  
 120  
 cgcattcgacg atgaaagctt cctccgccca gttgagccga cccaagccgc accgtgggag  
 180  
 gcagcgcata gccagcaggc gtggtggaat cacctgaagt acctgcgcac cgccgcgcgt  
 240  
 gaagcactgg tgggtccgct cgctattgag gtggagggga aattcgagg gcaggtaacc  
 300  
 ctgggaaaca ttcagcatgg cagcattcgc gattgctgg  
 339

<210> 1912  
 <211> 113  
 <212> PRT  
 <213> Homo sapiens

<400> 1912  
 Xaa Gly Trp Pro Glu Ser Thr Pro Ser Val Gln Leu Pro Ser Ser Ser  
 1                      5                      10                      15  
 Val Phe Pro Ser Gly Ala Arg Met Arg Leu Arg Pro Leu Leu Arg Ser  
 20                      25                      30  
 Asp Gly His Glu Trp Arg Arg Gln Arg Ile Asp Asp Glu Ser Phe Leu  
 35                      40                      45  
 Arg Pro Val Glu Pro Thr Gln Ala Ala Pro Trp Ala Ala Ala His Ser  
 50                      55                      60  
 Gln Gln Ala Trp Trp Asn His Leu Lys Tyr Leu Arg Thr Ala Ala Arg  
 65                      70                      75                      80  
 Glu Ala Leu Val Val Pro Leu Val Ile Glu Val Glu Gly Lys Phe Ala  
 85                      90                      95  
 Gly Gln Val Thr Leu Gly Asn Ile Gln His Gly Ser Ile Arg Asp Cys  
 100                      105                      110  
 Trp

<210> 1913  
 <211> 767

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1913

gtgcacaccg gttcacagcg atatttcagg caaattgaaa gcgtcagttc gataggctga  
60  
atgcgaaatg ggggatttgt caccctcagg gaccggaagg aagggagcag tccgatggca  
120  
gcgccagtac tcgatctcgt cctcccagcc ttgtccgaaa cctccgcaa tctcatcggc  
180  
cagaggttgc gccagggatg tcacacctcc atccccacat cgaatctacg gtgagcttgc  
240  
tcccagctgt cgggcagtac aaggcacctc ggatcaagct ttcttgccgt gaactggctc  
300  
tggtacccat caatgccacc cacctgcact ccaatcccc acaagttgtc caacacgccg  
360  
cagaattgcg tcgcagccac ccggaccttg ccatcaaggt ggcccgcacc accggaccag  
420  
caccggctct cctcaacctc gtcgatacgc gattgcgtct ggcagctcat cgcgtccatg  
480  
cccaggagct ggactcactc gtattgtctt cccctgatgg cggcgattta cgtggctcgg  
540  
caatgctgtc caggctgacc cggctgtggg cccagcacca ccaccttcg gtccgcatcg  
600  
ccaccaatcg tgggtgggct actgcggctc aggaggtcgt cggccgcctg cgacaggagg  
660  
ggcgccgtca tatcgagtg ggaagcctgt ggatttgcca cgacgagaat ttccgcattc  
720  
atactcgcca ggctttgcat gccggtgccg aggttgctgc cgcaccg  
767

&lt;210&gt; 1914

&lt;211&gt; 190

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1914

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | His | Leu | His | Pro | His | Ile | Glu | Ser | Thr | Val | Ser | Phe | Val | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ala | Val | Gly | Gln | Tyr | Lys | Ala | Pro | Arg | Ile | Lys | Leu | Ser | Trp | Arg | Glu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Leu | Val | Leu | Val | Pro | Ile | Asn | Ala | Thr | His | Leu | His | Ser | Asn | Pro | Pro |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Gln | Val | Val | Gln | His | Ala | Ala | Glu | Leu | Arg | Arg | Ser | His | Pro | Asp | Leu |
|     |     | 50  |     |     | 55  |     |     |     |     |     | 60  |     |     |     |     |
| Ala | Ile | Lys | Val | Ala | Arg | Pro | Thr | Gly | Pro | Ala | Pro | Val | Leu | Leu | Asn |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Leu | Val | Asp | Thr | Arg | Leu | Arg | Leu | Ala | Ala | His | Arg | Val | His | Ala | Gln |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Glu | Leu | Asp | Ser | Leu | Val | Leu | Ser | Ser | Pro | Asp | Gly | Gly | Asp | Leu | Arg |
|     |     |     | 100 |     |     |     | 105 |     |     |     |     |     | 110 |     |     |
| Gly | Ser | Ala | Met | Leu | Ser | Arg | Leu | Thr | Arg | Leu | Trp | Ser | Gln | His | His |
|     |     | 115 |     |     |     | 120 |     |     |     |     |     | 125 |     |     |     |
| His | Leu | Pro | Val | Arg | Ile | Ala | Thr | Asn | Arg | Gly | Gly | Ala | Thr | Ala | Val |

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      130              135              140
Glu Glu Val Val Ala Arg Leu Arg Gln Glu Gly Arg Arg His Ile Ala
145              150              155              160
Val Gly Ser Leu Trp Ile Cys Asp Asp Glu Asn Phe Arg Ile His Thr
      165              170              175
Arg Gln Ala Leu His Ala Gly Ala Glu Val Val Ala Ala Pro
      180              185              190

```

<210> 1915  
 <211> 571  
 <212> DNA  
 <213> Homo sapiens

<400> 1915  
 acgcgtccca ggccccacag gcccctctg gctctcaggc cccccgccca gtggccagga  
 60  
 aggtgtgagc gcacgatggg cagtcacgcc gcacacacgc tctgctcatg tccctcccca  
 120  
 ggaccctctg accgggcaca agggcagctg tgaggacaag gccacagcca caaaccaacc  
 180  
 tggcacacac ggctcagggc gaggcactgc cccatggggc tgcattgatcc acgctcacag  
 240  
 gtgtcattgt ctatgctcag gggggcttgg caccatggga aaccaccca gaacacatgg  
 300  
 agaagccaca gcacaacctc agcgcccgcc atgcaggacc ctgggtctca cccattgcac  
 360  
 ccaccgtgcg ggacccttgc gcctcaccgc gaacatccac agtgtgggac tgctgcgtct  
 420  
 caccacttgc acctgccgtg caggatccct gactctcacc cgccgcaccc gccgtgcggg  
 480  
 atccctgagt ctaccccgcc gcaccgcgcg tacctgccgc atccgccatg cgggaccct  
 540  
 gcgtctcacc caccgcaccc gccgtgcggg a  
 571

<210> 1916  
 <211> 119  
 <212> PRT  
 <213> Homo sapiens

<400> 1916  
 Met Gly Leu His Asp Pro Arg Ser Gln Val Ser Leu Ser Met Leu Arg  
 1 5 10 15  
 Gly Ala Trp His His Gly Lys Pro Thr Gln Asn Thr Trp Arg Ser His  
 20 25 30  
 Ser Thr Thr Ser Ala Pro Ala Met Gln Asp Pro Gly Ser His Pro Leu  
 35 40 45  
 His Pro Pro Cys Gly Thr Pro Ala Pro His Pro Glu His Pro Gln Cys  
 50 55 60  
 Gly Thr Ala Ala Ser His Pro Leu His Leu Pro Cys Arg Ile Pro Glu  
 65 70 75 80  
 Ser His Pro Pro His Pro Pro Cys Gly Ile Pro Glu Ser His Pro Pro  
 85 90 95  
 His Pro Pro Tyr Leu Pro His Pro Pro Cys Gly Thr Pro Ala Ser His

100 105 110  
 Pro Pro His Pro Pro Cys Gly  
 115

<210> 1917  
 <211> 360  
 <212> DNA  
 <213> Homo sapiens

<400> 1917  
 nnacgcgtga cggcgaaga tctccgcacc ctatctgccg ggtacacgcc gggtgattcc  
 60  
 gatattgtctt gggctgccat caccttgtagg cgcggtgtcg ttgcctccgc cttggaccgt  
 120  
 catccctatg gcccggtgaa gtcggtaaag gtagcaggtc cggccggcca cccagccccg  
 180  
 gatttcgccg ccggatgggt gtcgaccgc ttggcagttc ccgtacatcg cacagtggcc  
 240  
 gactccccaa ggagacactt cccggtgact catttgacgt tcaatcgga gacaacccac  
 300  
 gtagacgtcg atgtcattga cgagcgacg gttcgtgtat gtgttccggg ttcgccggaa  
 360

<210> 1918  
 <211> 120  
 <212> PRT  
 <213> Homo sapiens

<400> 1918  
 Xaa Arg Val Thr Gly Glu Asp Leu Arg Thr Leu Ser Ala Gly Tyr Thr  
 1 5 10 15  
 Pro Gly Asp Ser Asp Met Ser Trp Ala Ala Ile Thr Leu Trp Arg Gly  
 20 25 30  
 Val Val Ala Ser Ala Leu Asp Arg His Pro Tyr Gly Pro Val Lys Ser  
 35 40 45  
 Val Lys Val Ala Gly Pro Ala Gly His Pro Ala Pro Asp Phe Ala Ala  
 50 55 60  
 Gly Trp Leu Leu Asp Arg Leu Ala Val Pro Val His Arg Thr Val Ala  
 65 70 75 80  
 Asp Ser Pro Arg Arg His Phe Pro Val Thr His Leu Gln Phe Asn Arg  
 85 90 95  
 Glu Thr Thr His Val Asp Val Asp Val Ile Asp Glu Arg Thr Val Arg  
 100 105 110  
 Val Cys Val Pro Gly Ser Pro Glu  
 115 120

<210> 1919  
 <211> 354  
 <212> DNA  
 <213> Homo sapiens

<400> 1919  
 nnccggcgcga gctgtgtcca ctgcgctgtc cctgccacct cggccatctg cctctctctt  
 60

ccaggctgca gccatccctc ctgcaactgct gaggcctggc cagcgcatc ncggccacgc  
 120  
 ccacctccat cctctttgcc ccttactaaa cactgggagc cggcccgccc gcgacaggcc  
 180  
 aggccagcgg gaaggtgtag acgaacagcc caaaggattc agcagtgtaa gtacccacc  
 240  
 tacgcactta caaagtgcag gccaccgccc agccccacct ccagacacag gcggaggcca  
 300  
 agctcgcggg caccgtatca tcccgtgccg tctccacct acccctgcca attg  
 354

<210> 1920  
 <211> 118  
 <212> PRT  
 <213> Homo sapiens

<400> 1920  
 Xaa Gly Arg Ser Cys Val His Cys Ala Val Pro Ala Thr Ser Ala Ile  
 1 5 10 15  
 Cys Leu Ser Leu Pro Gly Cys Ser His Pro Ser Cys Thr Ala Glu Ala  
 20 25 30  
 Trp Pro Arg Ala Ser Arg Pro Arg Pro Pro Ser Ser Leu Pro Leu  
 35 40 45  
 Thr Lys His Trp Glu Pro Ala Arg Pro Arg Gln Ala Arg Pro Ala Gly  
 50 55 60  
 Arg Cys Arg Arg Thr Ala Gln Arg Ile Gln Gln Cys Lys Tyr Pro Thr  
 65 70 75 80  
 Tyr Ala Leu Thr Lys Cys Arg Pro Pro Pro Ser Pro Thr Ser Arg His  
 85 90 95  
 Arg Arg Arg Pro Ser Ser Arg Ala Pro Tyr His Pro Val Pro Ser Pro  
 100 105 110  
 Pro Tyr Pro Cys Gln Leu  
 115

<210> 1921  
 <211> 357  
 <212> DNA  
 <213> Homo sapiens

<400> 1921  
 gaattcatct ggaggcagag agatggggaa gcgggtggga gaagagcaag aacggaaact  
 60  
 atttttaata caaatccagt catggtattg tatacacagc agcctctgtc ttccagaaac  
 120  
 ctacacggcc gccacaccaa agttaatgcc accaggcgtc atcacacaga tgtgaggtgc  
 180  
 aggtgccact ccacagccgt gggcagacct gggagcccag ctctctctgg tttcaccctc  
 240  
 cacactgccc accccatcct tctctcccag tctccactcc atcgaagcct cccagatgac  
 300  
 ttcattgtggg gacaggagaa ctacagatca tggctgagaa gggcgcngtg tngtcca  
 357

<210> 1922



<211> 92  
 <212> PRT  
 <213> Homo sapiens

<400> 1922  
 Met Val Leu Tyr Thr Gln Gln Pro Leu Ser Ser Arg Asn Leu His Gly  
     1                    5                    10                    15  
 Arg His Thr Lys Val Asn Ala Thr Arg Arg His His Thr Asp Val Arg  
             20                    25                    30  
 Cys Arg Cys His Ser Thr Ala Val Gly Arg Pro Gly Ser Pro Ala Pro  
             35                    40                    45  
 Pro Gly Phe Thr Leu His Thr Ala His Pro Ile Leu Leu Ser Gln Ser  
             50                    55                    60  
 Pro Leu His Arg Ser Leu Pro Asp Asp Phe Met Trp Gly Gln Glu Asn  
     65                    70                    75                    80  
 Tyr Arg Ser Trp Leu Arg Arg Ala Xaa Cys Xaa Pro  
                     85                    90

<210> 1923  
 <211> 368  
 <212> DNA  
 <213> Homo sapiens

<400> 1923  
 nattnaatta tggtagagaaa aggcttatgc gttgcattgc tcgtgcttgt cacactgtca  
 60  
 ggtagtgcac agaagaaaga atgggttcagc aacattaaac tctcaggcta tggaatgacc  
 120  
 cagtatcaat atactgatca agagggaagc aaaggccatt catttaatct gcgattgttc  
 180  
 ccgttgccctt taaacggacg tatcttaaata gacttttatt ggaaggcaca ggcccaattc  
 240  
 aatggaaaca catcgacatt gggaagcagt ccacgtcttg tagacctatt tgtagagtgg  
 300  
 cagaaatatg attatttcaa ggtgaagtta ggccagttta agcgaccatt cacgtttgaa  
 360  
 aatcccag  
 368

<210> 1924  
 <211> 119  
 <212> PRT  
 <213> Homo sapiens

<400> 1924  
 Met Val Arg Lys Gly Leu Cys Val Ala Leu Leu Val Leu Val Thr Leu  
     1                    5                    10                    15  
 Ser Gly Ser Ala Gln Lys Lys Glu Trp Phe Ser Asn Ile Lys Leu Ser  
             20                    25                    30  
 Gly Tyr Gly Met Thr Gln Tyr Gln Tyr Thr Asp Gln Glu Gly Ser Lys  
             35                    40                    45  
 Gly His Ser Phe Asn Leu Arg Leu Phe Pro Leu Pro Leu Asn Gly Arg  
             50                    55                    60  
 Ile Leu Asn Asp Phe Tyr Trp Lys Ala Gln Ala Gln Phe Asn Gly Asn

```

65              70              75              80
Thr Ser Thr Leu Gly Ser Ser Pro Arg Leu Val Asp Leu Phe Val Glu
              85              90              95
Trp Gln Lys Tyr Asp Tyr Phe Lys Val Lys Leu Gly Gln Phe Lys Arg
              100              105              110
Pro Phe Thr Phe Glu Asn Pro
              115

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<210> 1925  
 <211> 427  
 <212> DNA  
 <213> Homo sapiens

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<400> 1925
actagtgttt ccagcaggca gcgatttaat tgttcttgca ttgaaaccca gtgtggcaag
60
ccccctgtg atttgaggct aateccctccc caccctgttc tggcacatgt gcggtgcccc
120
gggctcccc caggctgtga gcagataaag ccctgcgtgg cttcacaaca gtgactgggt
180
ctgagaaaca ggtccttgta caagcgacag ggagtgtca caccagatgt ggcagccct
240
ccacgccagg ctgtgtggtg cagccgcctg gtatatgtgt ccatcgctga tgaaaacagc
300
gttgtgtggt gcatgactgt tgtctgtttt cttcatggaa acaaggaaac ctaagcatta
360
aaacaacacc atccacgtct ggttccttag agcaaattga agcaccaggc tctggtgcac
420
ggcgcgc
427

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<210> 1926  
 <211> 104  
 <212> PRT  
 <213> Homo sapiens

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<400> 1926
Met His His Thr Thr Leu Phe Ser Ser Ala Met Asp Thr Tyr Thr Arg
1              5              10              15
Arg Leu His His Thr Ala Trp Arg Gly Gly Ala Ala Thr Ser Gly Val
              20              25              30
Ser Thr Pro Cys Arg Leu Tyr Lys Asp Leu Phe Leu Arg Thr Ser His
              35              40              45
Cys Cys Glu Ala Thr Gln Gly Phe Ile Cys Ser Gln Pro Gly Gly Ser
              50              55              60
Pro Gly His Arg Thr Cys Ala Arg Thr Gly Trp Gly Gly Ile Ser Leu
65              70              75              80
Lys Ser Gln Gly Gly Leu Pro His Trp Val Ser Met Gln Glu Gln Leu
              85              90              95
Asn Arg Cys Leu Leu Glu Thr Leu
              100

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<210> 1927  
 <211> 516

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1927

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nntctagaag actccaccta cttttcccca gactttcagc tctattctgg gaggcataaa
60
acatctgctt tgacgggtgga ggcaaccagt agcatcaggg aaaaagttgt tgaagatcct
120
ctttgtaact tccactcccc aaacttcctg aggatctcag aggtggaaat gagaggttcc
180
gaggatgcgg cagctggaac agtattgcag cggctgatcc aggaacaact gcggtatggc
240
accccaaccg agaacatgaa cttgctggcc attcagcacc aggccacagg gagtgcagga
300
ccagcccatc ctacaaacaa cttttcttcc acggaaaacc tcaactcaaga agaccacaa
360
atggtctacc agtcagcacg ccaagaaccg caggggtcaag aacaccagng tgganncaat
420
acgggtgatgg agaaacaggt ccgggtccagc cagcctcagc agaacaacga ggaactgccc
480
acttacgagg aggccaaagc acagcccttc acgcgt
516

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&lt;210&gt; 1928

&lt;211&gt; 172

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1928

```

Xaa Leu Glu Asp Ser Thr Tyr Phe Ser Pro Asp Phe Gln Leu Tyr Ser
 1             5             10             15
Gly Arg His Glu Thr Ser Ala Leu Thr Val Glu Ala Thr Ser Ser Ile
          20             25             30
Arg Glu Lys Val Val Glu Asp Pro Leu Cys Asn Phe His Ser Pro Asn
      35             40             45
Phe Leu Arg Ile Ser Glu Val Glu Met Arg Gly Ser Glu Asp Ala Ala
      50             55             60
Ala Gly Thr Val Leu Gln Arg Leu Ile Gln Glu Gln Leu Arg Tyr Gly
      65             70             75             80
Thr Pro Thr Glu Asn Met Asn Leu Leu Ala Ile Gln His Gln Ala Thr
          85             90             95
Gly Ser Ala Gly Pro Ala His Pro Thr Asn Asn Phe Ser Ser Thr Glu
          100            105            110
Asn Leu Thr Gln Glu Asp Pro Gln Met Val Tyr Gln Ser Ala Arg Gln
          115            120            125
Glu Pro Gln Gly Gln Glu His Gln Xaa Gly Xaa Asn Thr Val Met Glu
          130            135            140
Lys Gln Val Arg Ser Thr Gln Pro Gln Gln Asn Asn Glu Glu Leu Pro
          145            150            155            160
Thr Tyr Glu Glu Ala Lys Ala Gln Pro Phe Thr Arg
          165            170

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&lt;210&gt; 1929

&lt;211&gt; 843

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1929

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nnccgcggac actcagggtc tggggtcctt cttccccaag aggcctgact gcctgggtgt
60
tctccaggta catgtccttc aaggagaaat acacttcttg gcctgggcct gggccagggg
120
ccttctgggc cttgtctgga gtgcccacag cagaggctgg cttcttggtta ctatctgtgc
180
cagaggaccc agggccccgt gcagccctgc ctctgggctg ggtctgaacc tgctccacgc
240
ccacgggccc ctgagtccca caggagtcag gctcgtctga gctggggatg cagttttctg
300
aagaacggcg gctttgggct gccttctcta actctggctt cgcaccttg cttggattcc
360
tcattcttct ttttcttctt ggccccactc tcctctttga gggctctctg agggccccagc
420
tccatggcgt cacagatgta tgtcagcaag ccattgctctc cgtcctctcc attctcgggg
480
gcagcctccc cgttggtggt cacttctcca gaagcaaact gttgatcagg cccaaacctg
540
agtgtgagc agtctcagtc tctccctcct gccaaagccgc cagggtccca cctcagget
600
ccctggtagg gaccgagggg cccggcgctt gagccccgct caatcgccgc tttcgtgga
660
agcggtcggg gctgagcttg cgcagagtgt cgacctcccc aggcaccgcc ttctcgtgct
720
tccagctctg ctcatctctg cgcagctttg ccgcagcctt gcgcttcaac ttggcgaacc
780
agcgtggtg gatcttgtag tcagtcattg tgcccacctc ccaggaccct gagcaggaca
840
caa
843

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&lt;210&gt; 1930

&lt;211&gt; 120

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1930

```

Leu Pro Gly Cys Ser Pro Gly Thr Cys Pro Ser Arg Arg Asn Thr Leu
1          5          10          15
Pro Gly Leu Gly Leu Gly Gln Gly Pro Ser Gly Pro Cys Leu Glu Cys
20          25          30
Pro Gln Gln Arg Leu Ala Ser Trp Tyr Tyr Leu Cys Gln Arg Thr Gln
35          40          45
Ala Pro Val Gln Pro Cys Leu Trp Ala Gly Ser Glu Pro Ala Pro Arg
50          55          60
Pro Arg Ala Pro Glu Ser His Arg Ser Gln Ala Arg Leu Ser Trp Gly
65          70          75          80
Cys Ser Phe Leu Lys Asn Gly Gly Phe Gly Leu Pro Ser Leu Thr Leu
85          90          95
Ala Ser Ala Pro Cys Leu Asp Ser Ser Ser Phe Phe Phe Phe Leu Ala

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100 105 110  
 Pro Leu Ser Ser Leu Arg Ala Leu  
 115 120

<210> 1931  
 <211> 719  
 <212> DNA  
 <213> Homo sapiens

<400> 1931  
 acgcgtaggc ctgagccgct ccacagccct ggggagggca gaaaaggagg aaagtaggca  
 60  
 gtgcaagaaa caggaggaaa cccccagag cgcagcctcc tggaagcgga agggagcact  
 120  
 gaagaggagg tggttagtgg tgtcagaagc tgctgagaag ccagttagat aaagcggaga  
 180  
 agcttcctac taggacagct tcctcccagc ccagtgtggc cacgctgggtg tcctcgggtga  
 240  
 ccagacacgt ggccatgaat ttctcagtgt gctttattgt tgattaaatg cagtcggctc  
 300  
 acgaggctga ctttggaac aggaggtccg tgggtcgtgg aataagaaaag ggcacatcgg  
 360  
 ttgcagagga agggaaggaa gcccacggct gccttgggga gctttctgaa aggcaggctc  
 420  
 gatcatgcct ctctgggcta cggctcctc acggtggctc ctggttgga ctgaagtgg  
 480  
 ccccttggtc cctctctccc atctcagcat tagccaggac ttttggttg gcggccccag  
 540  
 cagggtgcc cccttgcaac acttcttttc ccacatgac gtgccttcca aacctacttc  
 600  
 cagcgtcgcc ctcttcaggg agcctttcat aaccacctct cccttcact ggctaaagat  
 660  
 gaggttgagc aactgcagga cttgggacct tgttctgcc cctgtggctg cctggatcc  
 719

<210> 1932  
 <211> 98  
 <212> PRT  
 <213> Homo sapiens

<400> 1932  
 Met Pro Leu Trp Ala Thr Val Ser Ser Arg Trp Leu Leu Val Gly Thr  
 1 5 10 15  
 Glu Val Val Pro Leu Val Pro Leu Ser His Leu Ser Ile Ser Gln Asp  
 20 25 30  
 Phe Trp Leu Gly Gly Pro Ser Arg Ala Ala Pro Leu Gln His Phe Phe  
 35 40 45  
 Ser His Met Ile Val Pro Ser Lys Pro Thr Ser Ser Val Ala Leu Phe  
 50 55 60  
 Arg Glu Pro Phe Ile Thr Thr Ser Pro Phe His Trp Leu Lys Met Arg  
 65 70 75 80  
 Leu Ser Asn Cys Arg Thr Trp Asp Leu Val Pro Ala Pro Val Ala Ala  
 85 90 95  
 Trp Ile

<210> 1933  
 <211> 295  
 <212> DNA  
 <213> Homo sapiens

<400> 1933  
 ggcgccgagc tgtgggcggc catggagcgc atgcctgccg acctgattat cctcgacctg  
 60  
 atgctgccgg gggataacgg cctcttgctg tgccagcgcc tgcgccagca atacgcaaca  
 120  
 ccagtgatca tgctgaccgc catgggcgaa ctgagtgatc gcgtgggggg cctggaaatg  
 180  
 ggcgccgatg actacctgaa caaacctttc gatgcccgtg aattacttgc cggggtgcgc  
 240  
 gctgtactgc gtccggcgtg tgaaaaccga ccgacgttgg gcgacgtgtc gcgcc  
 295

<210> 1934  
 <211> 98  
 <212> PRT  
 <213> Homo sapiens

<400> 1934  
 Gly Ala Glu Leu Trp Ala Ala Met Glu Arg Met Pro Ala Asp Leu Ile  
 1 5 10 15  
 Ile Leu Asp Leu Met Leu Pro Gly Asp Asn Gly Leu Leu Leu Cys Gln  
 20 25 30  
 Arg Leu Arg Gln Gln Tyr Ala Thr Pro Val Ile Met Leu Thr Ala Met  
 35 40 45  
 Gly Glu Leu Ser Asp Arg Val Gly Gly Leu Glu Met Gly Ala Asp Asp  
 50 55 60  
 Tyr Leu Asn Lys Pro Phe Asp Ala Arg Glu Leu Leu Ala Arg Val Arg  
 65 70 75 80  
 Ala Val Leu Arg Pro Ala Cys Glu Asn Arg Pro Thr Leu Gly Asp Val  
 85 90 95  
 Ser Arg

<210> 1935  
 <211> 298  
 <212> DNA  
 <213> Homo sapiens

<400> 1935  
 accggtgtgg cgggcgcggc cttcaccacc atcggtcca cggggccgac ggcggttcg  
 60  
 caatacatcg tcgatacctt cctggtagtg gtgttcgggg gggcccaaag cctgttcggc  
 120  
 cccatcgctt cggcgttcgt gattgccag acccaatcgc tgcggagtt tttcctcagt  
 180  
 ggctcgatgg ccaaggtgct gacctgtcg tcggtgattc tgatcctgat gctgcgccc  
 240

caagggttgt tctccatcaa agtgcgcaag taaaggcgag cagataaggg ttttaagca  
298

<210> 1936  
<211> 90  
<212> PRT  
<213> Homo sapiens

<400> 1936  
Thr Gly Val Ala Gly Ala Ala Phe Thr Thr Ile Gly Ser Thr Gly Pro  
1 5 10 15  
Thr Ala Gly Ser Gln Tyr Ile Val Asp Thr Phe Leu Val Val Val Phe  
20 25 30  
Gly Gly Ala Gln Ser Leu Phe Gly Pro Ile Ala Ser Ala Phe Val Ile  
35 40 45  
Ala Gln Thr Gln Ser Leu Ser Glu Phe Phe Leu Ser Gly Ser Met Ala  
50 55 60  
Lys Val Leu Thr Leu Ser Ser Val Ile Leu Ile Leu Met Leu Arg Pro  
65 70 75 80  
Gln Gly Leu Phe Ser Ile Lys Val Arg Lys  
85 90

<210> 1937  
<211> 513  
<212> DNA  
<213> Homo sapiens

<400> 1937  
gcacggcgca cagtaacacc aactcgaaag agaccttatg aatgcaaggt gtgcgggaaa  
60  
gcctttaatt ctcccaattt atttcaaadc catcaaagaa ctcacactgg aaagaggtcc  
120  
tataaatgta gggaaatagt gagagccttc acagtttcca gtttctttcg aaaacatgga  
180  
aaaatgcata ctggagaaaa acgctatgaa tgtaaatact gtggaaaacc tatcgattat  
240  
cccagtttat ttcaaattca tgtagaact cactctggag aaaaacccta caaatgtaaa  
300  
caatgtggta aagccttcac ttccgcaggt tacgttcgga cacatgaaat cagatctcac  
360  
gcgctggaga aatcccacca atgtcaggaa tgtgggaaga aactcagttg ttccagttcc  
420  
cttcacagac atgaaagaac tcatagtgga ggaaaactct acgaatgtca aaaatgtgac  
480  
caagtcttta gatgtccac gtcccttcac gcg  
513

<210> 1938  
<211> 171  
<212> PRT  
<213> Homo sapiens

<400> 1938  
Ala Arg Arg Thr Val Thr Pro Thr Arg Lys Arg Pro Tyr Glu Cys Lys

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      1           5           10           15
Val Cys Gly Lys Ala Phe Asn Ser Pro Asn Leu Phe Gln Ile His Gln
      20           25           30
Arg Thr His Thr Gly Lys Arg Ser Tyr Lys Cys Arg Glu Ile Val Arg
      35           40           45
Ala Phe Thr Val Ser Ser Phe Phe Arg Lys His Gly Lys Met His Thr
      50           55           60
Gly Glu Lys Arg Tyr Glu Cys Lys Tyr Cys Gly Lys Pro Ile Asp Tyr
65           70           75           80
Pro Ser Leu Phe Gln Ile His Val Arg Thr His Ser Gly Glu Lys Pro
      85           90           95
Tyr Lys Cys Lys Gln Cys Gly Lys Ala Phe Ile Ser Ala Gly Tyr Val
      100          105          110
Arg Thr His Glu Ile Arg Ser His Ala Leu Glu Lys Ser His Gln Cys
      115          120          125
Gln Glu Cys Gly Lys Lys Leu Ser Cys Ser Ser Ser Leu His Arg His
      130          135          140
Glu Arg Thr His Ser Gly Lys Lys Leu Tyr Glu Cys Gln Lys Cys Asp
145          150          155          160
Gln Val Phe Arg Cys Pro Thr Ser Leu His Ala
      165          170

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&lt;210&gt; 1939

&lt;211&gt; 1233

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1939

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gccggcagcg ccgctcccca gggagggagt ccgcagcctg aggtcttctc caagaaaaaa
60
aaagaaaaaa aaacaacatg gctgcaaagg agaaactgga ggcagtgtta aatgtggccc
120
tgagggtgcc aagcatcatg ctgttgatg tcctgtacag atgggatgtc agctcctttt
180
tccagcagat ccaaagaagt agccttagta ataaccctct tttccagtat aagtatttgg
240
ctcttaatat gcattatgta gggtatatct taagtgtggt gctgctaaca ttgccaggc
300
agcatctggt tcagctttat ctatattttt tgactgctct gctcctctat gctggacatc
360
aaatttccag ggactatggt cggagtgaac tgggggttgc ctatgaggga ccaatgtatt
420
tagaacctct ctctatgaat cgggtttacca cagccttaat aggtcagttg gtggtgtgta
480
ctttatgctc ctgtgtcatg aaaacaaagc agatttggct gttttcagct cacatgcttc
540
ctctgctagc acgactctgc cttgttcctt tggagacaat tgctatcatc aataaatttg
600
ctatgatttt tactggattg gaagtctctt atttcttgg gtctaattct ttggtacctt
660
ataaccttgc taaatctgca tacagagaat tgggtcaggt agtggaggta tatggccttc
720
tcgccttggg aatgtccctg tggaatcaac tggtagtccc tgttcttttc atggttttct
780

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ggctcgtctt atttgcctt cagatttact cctatttcag tactcgagat cagcctgcat  
 840  
 cacgtgagag gcttcttttc ctttttctga caaggtaatt aataagagcc tatgatacta  
 900  
 tatataacct tagaaagaga aaactttgat ctaggaatag taagttttgc agattacttt  
 960  
 ttcggttcat gttacacaac ttcgtatttt gttaagatag gattttcatt cactggatac  
 1020  
 ctaggtttgg caatgcagag aggtgctaac ataataatgt ggtttatttg gctgcactat  
 1080  
 ggaccagagt gtagcaaag atttgtggaa aggtacatag cacatcgtaa aagtattttt  
 1140  
 tcaatttcaa gttaaaatta ttgggtcaat cagaaaaaag tatattataa aaataacatt  
 1200  
 tattgagtat tttaaagtga ccataccatt naa  
 1233

<210> 1940

<211> 266

<212> PRT

<213> Homo sapiens

<400> 1940

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Ala | Lys | Glu | Lys | Leu | Glu | Ala | Val | Leu | Asn | Val | Ala | Leu | Arg |
| 1   |     |     | 5   |     |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Val | Pro | Ser | Ile | Met | Leu | Leu | Asp | Val | Leu | Tyr | Arg | Trp | Asp | Val | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ser | Phe | Phe | Gln | Gln | Ile | Gln | Arg | Ser | Ser | Leu | Ser | Asn | Asn | Pro | Leu |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Phe | Gln | Tyr | Lys | Tyr | Leu | Ala | Leu | Asn | Met | His | Tyr | Val | Gly | Tyr | Ile |
|     |     |     | 50  |     |     |     | 55  |     |     |     | 60  |     |     |     |     |
| Leu | Ser | Val | Val | Leu | Leu | Thr | Leu | Pro | Arg | Gln | His | Leu | Val | Gln | Leu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Tyr | Leu | Tyr | Phe | Leu | Thr | Ala | Leu | Leu | Leu | Tyr | Ala | Gly | His | Gln | Ile |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ser | Arg | Asp | Tyr | Val | Arg | Ser | Glu | Leu | Gly | Phe | Ala | Tyr | Glu | Gly | Pro |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Met | Tyr | Leu | Glu | Pro | Leu | Ser | Met | Asn | Arg | Phe | Thr | Thr | Ala | Leu | Ile |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Gly | Gln | Leu | Val | Val | Cys | Thr | Leu | Cys | Ser | Cys | Val | Met | Lys | Thr | Lys |
|     |     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |
| Gln | Ile | Trp | Leu | Phe | Ser | Ala | His | Met | Leu | Pro | Leu | Leu | Ala | Arg | Leu |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Cys | Leu | Val | Pro | Leu | Glu | Thr | Ile | Ala | Ile | Ile | Asn | Lys | Phe | Ala | Met |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Ile | Phe | Thr | Gly | Leu | Glu | Val | Leu | Tyr | Phe | Leu | Gly | Ser | Asn | Leu | Leu |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Val | Pro | Tyr | Asn | Leu | Ala | Lys | Ser | Ala | Tyr | Arg | Glu | Leu | Val | Gln | Val |
|     |     |     | 195 |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Val | Glu | Val | Tyr | Gly | Leu | Leu | Ala | Leu | Gly | Met | Ser | Leu | Trp | Asn | Gln |
|     |     |     | 210 |     |     |     | 215 |     |     |     |     | 220 |     |     |     |
| Leu | Val | Val | Pro | Val | Leu | Phe | Met | Val | Phe | Trp | Leu | Val | Leu | Phe | Ala |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     | 240 |     |
| Leu | Gln | Ile | Tyr | Ser | Tyr | Phe | Ser | Thr | Arg | Asp | Gln | Pro | Ala | Ser | Arg |

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<210> 1943
<211> 386
<212> DNA
<213> Homo sapiens
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&lt;400&gt; 1943

nagaaacatt cagggctcca acaggggtgga aaacatgagg ctgcaggatg tttaacagga  
60  
gtctttgctg cagctcctct tggagccttt aacgagatac tatcatgcct atgaactgcc  
120  
acacagatgt acatggcata gcactgcccc aaagtatcag cccaaggaac cctactttcc  
180  
ccagcaacat ctaactcaga aatgctgac tttggcctca atctgggtccc aaaatacctc  
240  
caggggtat tgggcttcgg tgtgttcaca cacttgggtca tgtaaactctg aacacagact  
300  
ctctctgcct tggcaagaac cccccacacc cccatagata attacaccct ttggttctcc  
360  
ctctgcaatc tcacctgcta gagacg  
386

&lt;210&gt; 1944

&lt;211&gt; 111

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1944

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gly | Val | Trp | Gly | Val | Leu | Ala | Lys | Ala | Glu | Arg | Val | Cys | Val | Gln |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     | 15  |     |     |
| Ile | Tyr | Met | Thr | Lys | Cys | Val | Asn | Thr | Pro | Lys | Pro | Lys | Ile | Pro | Trp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Arg | Tyr | Phe | Gly | Thr | Arg | Leu | Arg | Pro | Lys | Ile | Ser | Ile | Ser | Glu | Leu |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Asp | Val | Ala | Gly | Glu | Ser | Arg | Val | Pro | Trp | Ala | Asp | Thr | Phe | Gly | Gln |
|     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |
| Cys | Tyr | Ala | Met | Tyr | Ile | Cys | Val | Ala | Val | His | Arg | His | Asp | Ser | Ile |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |     |
| Ser | Leu | Lys | Ala | Pro | Arg | Gly | Ala | Ala | Ala | Lys | Thr | Pro | Val | Lys | His |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Pro | Ala | Ala | Ser | Cys | Phe | Pro | Pro | Cys | Trp | Ser | Pro | Glu | Cys | Phe |     |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

&lt;210&gt; 1945

&lt;211&gt; 443

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1945

nacgcgtcac gaagcgcgct cggcccacgt ggetccaagg gcgtccacgc gccctcctc  
60  
gaccgattgg tgctgaacat ggcacggtgg catgcgacgc gcaccaagat ccagctcaag  
120  
ctcgcgatcc agcgantcgg catgctacag gagaaaaaag ccgcactgca taaaaaagt  
180  
cgactggaaa ttgcggacnn tcgtagacgc caaaagcttg aatctgcgcg cgtcaaaacc  
240  
gaatcgctga tcatggacga tatacatttg gagttgcttg aactgcttga gctctactgt  
300

gagacactct atgccagatt cggattacta gaaggacgcg acaatgagcc tgatgatgcg  
 360  
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 420  
 catgtgctcc aaaacatgct gaa  
 443

<210> 1946  
 <211> 147  
 <212> PRT  
 <213> Homo sapiens

<400> 1946  
 Xaa Ala Ser Arg Ser Ala Leu Gly Pro Arg Gly Ser Lys Gly Val His  
   1                  5                  10                  15  
 Ala Pro Leu Leu Asp Arg Leu Val Ser Asn Met Ala Arg Trp His Ala  
                   20                  25                  30  
 Thr Arg Thr Lys Ile Gln Leu Lys Leu Ala Ile Gln Arg Xaa Gly Met  
           35                  40                  45  
 Leu Gln Glu Lys Lys Ala Ala Leu His Lys Lys Val Arg Leu Glu Ile  
   50                  55                  60  
 Ala Asp Xaa Arg Arg Arg Gln Lys Leu Glu Ser Ala Arg Val Lys Thr  
 65                  70                  75                  80  
 Glu Ser Leu Ile Met Asp Asp Ile His Leu Glu Leu Leu Glu Leu Leu  
                   85                  90                  95  
 Glu Leu Tyr Cys Glu Thr Leu Tyr Ala Arg Phe Gly Leu Leu Glu Gly  
                   100                  105                  110  
 Arg Asp Asn Glu Pro Asp Asp Ala Ile Arg Glu Pro Met Ile Ala Ile  
                   115                  120                  125  
 Ile His Ala Ala His Arg Thr Glu Val Lys Glu Leu His Val Leu Gln  
   130                  135                  140  
 Asn Met Leu  
 145

<210> 1947  
 <211> 472  
 <212> DNA  
 <213> Homo sapiens

<400> 1947  
 cggccgtgta ggccgtgacg gtgaccaaca gagccacagc gggcccgtg taggcgggag  
 60  
 gactgtgccg caggtgcagg agggtcagat ggaaacaaaa ggcgcaggcg gcctccacaa  
 120  
 gcgccccgtg gggcacggat gtgcgcaggg ccgagctgca gctctggggc atgaggctct  
 180  
 gcagcaggtg caggtcactg agctcccagg cccagcagag gcgcgtcagg gtgcaggcgg  
 240  
 cctgcatgcc cagcccctgt gccgccagct tcagcagcgt gccaggcaga gactcctcgg  
 300  
 ccatgaggaa ctccctgcagg gacacggtgg ggttggccga ggccccgtcc aaggtgacct  
 360  
 cgtgcccag gaagagcagg aagagcaggg tgagcagcag gtcaggccca aagtccccag  
 420

cccagggccc gagctcgaac agcgtcctca tctccaggaa gcaggccccc ag  
472

<210> 1948  
<211> 150  
<212> PRT  
<213> Homo sapiens

<400> 1948  
Met Arg Thr Leu Phe Glu Leu Gly Pro Trp Ala Gly Asp Phe Gly Pro  
1 5 10 15  
Asp Leu Leu Leu Thr Leu Leu Phe Leu Phe Leu Ala His Gly Val  
20 25 30  
Thr Leu Asp Gly Ala Ser Ala Asn Pro Thr Val Ser Leu Gln Glu Phe  
35 40 45  
Leu Met Ala Glu Glu Ser Leu Pro Gly Thr Leu Leu Lys Leu Ala Ala  
50 55 60  
Gln Gly Leu Gly Met Gln Ala Ala Cys Thr Leu Thr Arg Leu Cys Trp  
65 70 75 80  
Ala Trp Glu Leu Ser Asp Leu His Leu Leu Gln Ser Leu Met Ala Gln  
85 90 95  
Ser Cys Ser Ser Ala Leu Arg Thr Ser Val Pro His Gly Ala Leu Val  
100 105 110  
Glu Ala Ala Cys Ala Phe Cys Phe His Leu Thr Leu Leu His Leu Arg  
115 120 125  
His Ser Pro Pro Ala Tyr Ser Gly Pro Ala Val Ala Leu Leu Val Thr  
130 135 140  
Val Thr Ala Tyr Thr Ala  
145 150

<210> 1949  
<211> 395  
<212> DNA  
<213> Homo sapiens

<400> 1949  
acgcgttgag ggaggcgaca tgcttcatga gcgcttggcg ccactgctca agcgacatct  
60  
gcccccttgct gatgttgcaa ggcggacagg acggcatgta attcgactcg acgtcacgct  
120  
ccggatgcct cgacgggacg ctcacaagct tccattggcc attcgcgggg cgcttggtct  
180  
cgaccgcgcg tacaaccggg tctacatggt cgccatgccca ccgatcgggc aatggcattc  
240  
cacagtacgc gcagcggccg tcgtatttgc gccggagccg atcgcgctgt gctttcgta  
300  
gccggtcac gctttatgct ccacggcagg tgtggcagca tcctggcagg cgactccaag  
360  
atccgcgctt gcgtccagct tgacggcgcc gggtt  
395

<210> 1950  
<211> 125  
<212> PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1950

```

Met Leu His Glu Arg Leu Ala Pro Leu Leu Lys Arg His Leu Pro Leu
 1           5           10           15
Ala Asp Val Ala Arg Arg Thr Gly Arg His Val Ile Arg Leu Asp Val
          20           25           30
Thr Leu Arg Met Pro Arg Arg Asp Ala His Lys Leu Pro Leu Ala Ile
          35           40           45
Arg Gly Ser Leu Gly Leu Asp Arg Ala Tyr Asn Arg Val Tyr Met Val
          50           55           60
Ala Met Pro Pro Ile Gly Gln Trp His Ser Thr Val Arg Ala Ala Ala
65           70           75           80
Val Val Phe Ala Pro Glu Pro Ile Ala Leu Cys Phe Arg Gln Pro Ala
          85           90           95
His Ala Leu Cys Ser Thr Ala Gly Val Ala Ala Ser Trp Gln Ala Thr
          100          105          110
Pro Arg Ser Ala Pro Ala Ser Ser Leu Thr Ala Pro Gly
          115          120          125

```

&lt;210&gt; 1951

&lt;211&gt; 363

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1951

```

cgggcgccgc ctctccgctc ccggggccccc gccgccaccg cgccccccgc gggagatgga
60
acagcggaac cggctcgggtg ccctcgata cctgccgcct ctgctgctgc atgccctgct
120
gctcttcgtg gccgacgctg cattcacaga agtccccaaa gatgtgacag tacgggaggg
180
agacgacatc gaaatgccct gcgcgttccg ggccagcgga gccacctcgt attcgttgga
240
gattcagtgg tggtagctca aggagccacc ccgggagctg ctgcacgagc tggcgctcag
300
cgtgccgggc gcccgagca aggtaacaaa taaggatgca actaaaatca gcaccgtacg
360
cgt
363

```

&lt;210&gt; 1952

&lt;211&gt; 110

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1952

```

Arg Pro Pro Pro Leu Arg Ser Arg Ala Pro Ala Ala Thr Ala Pro Pro
 1           5           10           15
Ala Gly Asp Gly Thr Ala Glu Pro Ala Arg Cys Pro Arg Ile Pro Ala
          20           25           30
Ala Ser Ala Ala Ala Cys Pro Ala Ala Leu Arg Gly Arg Arg Cys Ile
          35           40           45
His Arg Ser Pro Gln Arg Cys Asp Ser Thr Gly Gly Arg Arg His Arg

```

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 50  |     | 55  |     | 60  |     |     |     |     |     |     |     |     |     |     |     |
| Asn | Ala | Leu | Arg | Val | Pro | Gly | Gln | Arg | Ser | His | Leu | Val | Phe | Ala | Gly |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     |     | 80  |
| Asp | Ser | Val | Val | Val | Pro | Gln | Gly | Ala | Thr | Pro | Gly | Ala | Ala | Ala | Arg |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ala | Gly | Ala | Gln | Arg | Ala | Gly | Arg | Pro | Glu | Gln | Gly | Asn | Lys |     |     |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

<210> 1953  
 <211> 329  
 <212> DNA  
 <213> Homo sapiens

<400> 1953  
 acgcgtcagc ctgagcccaa taactataaa agagtcgcaa ccatgactgt gctattgagt  
 60  
 gagcgcagcc agattttccg ggggtgccgat gcctacgcgg tgctggacta cgtaaccag  
 120  
 catgtgggca gccactgcat tcgcctgcct cccaagggcc ggccacgggc gagtatcagc  
 180  
 catcgcacct ttgccagcct ggacctgtgc cgcacagct acggcgctcc ggtacgggtc  
 240  
 acatcgggtg cgctggagac catctatcac ctgcagatcc tgttgagcgg gcattgccgc  
 300  
 tccagctccc gtggtgagga tgacgtggn  
 329

<210> 1954  
 <211> 109  
 <212> PRT  
 <213> Homo sapiens

|   |
|---|
| <400> 1954  |
| Thr Arg Gln Pro Glu Pro Asn Asn Tyr Lys Arg Val Ala Thr Met Thr |
| 1 5 10 15   |
| Val Leu Leu Ser Glu Arg Ser Gln Ile Phe Arg Gly Ala Asp Ala Tyr |
| 20 25 30  |
| Ala Val Ser Asp Tyr Val Asn Gln His Val Gly Ser His Cys Ile Arg |
| 35 40 45  |
| Leu Pro Pro Lys Gly Arg Pro Arg Ala Ser Ile Ser His Arg Thr Phe |
| 50 55 60  |
| Ala Ser Leu Asp Leu Cys Arg Ile Ser Tyr Gly Ala Pro Val Arg Val |
| 65 70 75 80   |
| Thr Ser Val Ala Leu Glu Thr Ile Tyr His Leu Gln Ile Leu Leu Ser |
| 85 90 95  |
| Gly His Cys Arg Ser Ser Ser Arg Gly Glu Asp Asp Val             |
| 100 105   |

<210> 1955  
 <211> 415  
 <212> DNA  
 <213> Homo sapiens

<400> 1955

acgcgtggct cgacgaaaac caagtacgag acatgcccga caaggtacta tcacacatgg  
 60  
 tggaatactg ctgggggccc ttcacagaca acatcaaata cgctgtagct gcccaatatt  
 120  
 ggaaagggcc acacaagccc gatagtgacc atcaacggat cattgtaggc tatttcaaaa  
 180  
 ccgccaaaca agccatgaac gcagcaaac aattccactg gaacacccgg ctacaacaac  
 240  
 aatggaaaac atggatactc ccagtcacaca acggcacctg gtccgagttt ttcacccaac  
 300  
 aaaaaacttt gctagacgag caagacgata gcaatagcga gctgccggag catctacaaa  
 360  
 acgtcatgtg cggcaaaaaca ctccaccacc aagacgacac catatcgtgg tgcac  
 415

<210> 1956

<211> 127

<212> PRT

<213> Homo sapiens

<400> 1956

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Pro | Asp | Lys | Val | Leu | Ser | His | Met | Val | Glu | Tyr | Cys | Trp | Gly | Arg |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Phe | Thr | Asp | Asn | Ile | Lys | Tyr | Ala | Val | Ala | Ala | Gln | Tyr | Trp | Lys | Gly |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Pro | His | Lys | Pro | Asp | Ser | Asp | His | Gln | Arg | Ile | Ile | Val | Gly | Tyr | Phe |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Lys | Thr | Ala | Lys | Gln | Ala | Met | Asn | Ala | Ala | Lys | Gln | Phe | His | Trp | Asn |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Thr | Arg | Leu | Gln | Gln | Gln | Trp | Lys | Thr | Trp | Ile | Leu | Pro | Val | His | Asn |
|     |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     | 80  |     |
| Gly | Thr | Val | Ser | Glu | Phe | Phe | Thr | Gln | Gln | Lys | Thr | Leu | Leu | Asp | Glu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Gln | Asp | Asp | Ser | Asn | Ser | Glu | Leu | Pro | Glu | His | Leu | Gln | Asn | Val | Met |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Cys | Gly | Lys | Thr | Leu | His | His | Gln | Asp | Asp | Thr | Ile | Ser | Trp | Cys |     |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     |     | 125 |     |     |

<210> 1957

<211> 526

<212> DNA

<213> Homo sapiens

<400> 1957

acgcgttccg gagagatttt cctaacctct ctccgagctg ctgagccgat cggtgaccac  
 60  
 caggagctcc tccctgtgag gacaaagttc cagagtcggg gtcacggggc ttacttattg  
 120  
 gggaggaggc ccgccggggc cgcagtgggc gaggggccct tggcgcgctc ctgggaggtc  
 180  
 agacctggca cagtgtggcg aaggtttcca gtgcgatccc gagtcgaggg cgcatttcgc  
 240  
 ggtgactgcc agcatgaacc gcagccgacc gagttctgcg atcgggcttc tccgcagagt  
 300



ggggaccctg gggaaggcgc caacttctct cctctgccc cctcactccc cgcgggcgtc  
 360  
 cctggggcgc ctgcccgggc cgcactgggc ggcctccatc gtcccttccc tctacctgca  
 420  
 ctgccccagg cgggagagag gccttgggcc nncgaggac cagctgcagc gggcagcggg  
 480  
 gtctgtctcc cccaaccccc gccccatggc acggggctga accggt  
 526

<210> 1958  
 <211> 175  
 <212> PRT  
 <213> Homo sapiens

<400> 1958  
 Thr Arg Ser Gly Glu Ile Phe Leu Thr Ser Leu Arg Ala Ala Glu Pro  
 1 5 10 15  
 Ile Gly Asp His Gln Glu Leu Leu Pro Val Arg Thr Lys Phe Gln Ser  
 20 25 30  
 Arg Gly His Gly Pro Tyr Leu Leu Gly Arg Arg Pro Ala Gly Ala Ala  
 35 40 45  
 Val Gly Glu Gly Pro Leu Ala Arg Ser Trp Glu Val Arg Pro Gly Thr  
 50 55 60  
 Val Trp Arg Arg Phe Pro Val Arg Ser Arg Val Glu Gly Ala Phe Arg  
 65 70 75 80  
 Gly Asp Cys Gln His Glu Pro Gln Pro Thr Glu Phe Cys Asp Arg Ala  
 85 90 95  
 Ser Pro Gln Ser Gly Asp Pro Gly Glu Gly Ala Asn Phe Ser Pro Leu  
 100 105 110  
 Pro Thr Ser Leu Pro Ala Gly Val Pro Gly Pro Pro Ala Arg Ala Ala  
 115 120 125  
 Leu Gly Gly Leu His Arg Pro Phe Pro Leu Pro Ala Leu Pro Gln Ala  
 130 135 140  
 Gly Glu Arg Pro Trp Pro Xaa Glu Gly Pro Ala Ala Gly Ser Gly  
 145 150 155 160  
 Val Leu Leu Pro Gln Pro Pro Pro His Gly Thr Gly Leu Asn Arg  
 165 170 175

<210> 1959  
 <211> 378  
 <212> DNA  
 <213> Homo sapiens

<400> 1959  
 gtgcaccgga cggctcctcc aacggatcat gcgacggccc agcgggaaggc tcacccgagt  
 60  
 cgtcagaagg atcagggcgc ttgtcgtcgt cagacttcag gacatccac gacatggtga  
 120  
 acggctggga ggagaccttg tccccgtcgg tcttggcgcc gacaacaaca ccgctcatgg  
 180  
 tgtattttcc ggcattgagt aagaaccagt gggcattgct atgacccttg atcggcagt  
 240  
 aggtctcctt gaccacctga tatgtgtcat cagcgaggaa ggtgccgagt ttggcgttct  
 300

cgtctgcctc gggatgaattg ccgaggaggt acatcttgcc tggacccgta atcgcgggtga  
 360  
 agtcgacgcg caacgcgt  
 378

<210> 1960  
 <211> 111  
 <212> PRT  
 <213> Homo sapiens

<400> 1960  
 Met Tyr Leu Leu Gly Asn Ser Pro Glu Ala Asp Glu Asn Ala Lys Leu  
 1 5 10 15  
 Gly Thr Phe Leu Ala Asp Asp Thr Tyr Gln Val Val Lys Gly Ala Ser  
 20 25 30  
 Leu Pro Ile Lys Gly His Gln His Ala His Trp Phe Phe Thr His Ala  
 35 40 45  
 Gly Lys Tyr Thr Met Ser Gly Val Val Val Gly Ala Lys Thr Asp Gly  
 50 55 60  
 Asp Lys Val Ser Ser Gln Pro Phe Thr Met Ser Trp Asp Val Leu Lys  
 65 70 75 80  
 Ser Asp Asp Asp Lys Arg Pro Asp Pro Ser Asp Asp Ser Gly Glu Pro  
 85 90 95  
 Ser Ala Gly Pro Ser His Asp Pro Leu Glu Glu Pro Ser Gly Ala  
 100 105 110

<210> 1961  
 <211> 384  
 <212> DNA  
 <213> Homo sapiens

<400> 1961  
 ggatccaccc cggaaaccgg caggatgaag ggggcaagtg aggagaagct ggcattctgtg  
 60  
 tccaacctgg tcaactgtgtt tgagaatagc aggacccag aagcagcacc cagaggccag  
 120  
 aggctagagg acgtgcatca ccgccctgag tgcaggcctc ccgagtcacc aggaccacgg  
 180  
 gagaagacga atgtcgggga ggccgtgggg tctgagccca ggacagtcag caggaggtac  
 240  
 ctgaactccc tgaagaacaa gctgtccagc gaagcctgga ggaaatcttg ccagcctgtg  
 300  
 accctctcag gatcggggac gcaggagcca gagaagaaga tcgtccagga gctgctggag  
 360  
 acagagcagg cctatgtggc gcgc  
 384

<210> 1962  
 <211> 128  
 <212> PRT  
 <213> Homo sapiens

<400> 1962  
 Gly Ser Thr Pro Glu Thr Gly Arg Met Lys Gly Ala Ser Glu Glu Lys

```

      1           5           10           15
Leu Ala Ser Val Ser Asn Leu Val Thr Val Phe Glu Asn Ser Arg Thr
      20           25           30
Pro Glu Ala Ala Pro Arg Gly Gln Arg Leu Glu Asp Val His His Arg
      35           40           45
Pro Glu Cys Arg Pro Pro Glu Ser Pro Gly Pro Arg Glu Lys Thr Asn
      50           55           60
Val Gly Glu Ala Val Gly Ser Glu Pro Arg Thr Val Ser Arg Arg Tyr
      65           70           75           80
Leu Asn Ser Leu Lys Asn Lys Leu Ser Ser Glu Ala Trp Arg Lys Ser
      85           90           95
Cys Gln Pro Val Thr Leu Ser Gly Ser Gly Thr Gln Glu Pro Glu Lys
      100           105           110
Lys Ile Val Gln Glu Leu Leu Glu Thr Glu Gln Ala Tyr Val Ala Arg
      115           120           125

```

<210> 1963  
 <211> 323  
 <212> DNA  
 <213> Homo sapiens

```

<400> 1963
nnncccttcc taccctccca tactccccac ccctcttctt cccctgtgac tgagcttgca
60
ggcatgaaac acccacctgg cctctctccc tctgttttgc ccttctgtgc gtctctctcc
120
cacagctgcc tggctcttcg gcgtcagtc accaccttct gcagctctcc ctcaccctgg
180
cgaccactca ggcatgcac tcgcggggccc ccttcagacc tctcgggggc atcttcccct
240
tccctggcca ttatttttct tcatctgggc tgggcccggg ggggcgttcc ccccttctt
300
cttctttctt tttttttctc ttt
323

```

<210> 1964  
 <211> 107  
 <212> PRT  
 <213> Homo sapiens

```

<400> 1964
Xaa Pro Phe Leu Pro Ser His Thr Pro His Pro Ser Ser Ser Pro Cys
1           5           10           15
Ala Glu Leu Ala Gly Met Lys His Pro Pro Gly Leu Ser Pro Ser Val
      20           25           30
Leu Pro Leu Leu Ser Ser Leu Ser His Ser Cys Leu Ala Leu Arg Arg
      35           40           45
Gln Ser Thr Thr Phe Cys Ser Ser Pro Ser Pro Trp Arg Pro Leu Arg
      50           55           60
His Ala Ser Arg Gly Pro Pro Ser Asp Leu Ser Gly Ser Ser Ser Pro
      65           70           75           80
Ser Leu Ala Ile Ile Phe Leu His Leu Gly Trp Ala Arg Arg Gly Val
      85           90           95
Pro Pro Leu Pro Leu Leu Ser Phe Phe Phe Ser

```

100

105

<210> 1965  
<211> 1416  
<212> DNA  
<213> Homo sapiens

<400> 1965  
cggctggggc aggagctgga cgacgccacc atggacctgg agcagcagcg gcagcttgtg  
60  
agcaccctgg agaagaagca gcgcaagttt gaccagcttc tggcagagga gaaggcagct  
120  
gtacttcggg cagtggagga acgtgagcgg gccgaggcag agggccggga gcgtgaggct  
180  
cgggccctgt cactgacacg ggcactggag gaggagcagg aggcacgtga ggagctggag  
240  
cggcagaacc gggccctgcg ggctgagctg gaggcactgc tgagcagcaa ggatgacgtc  
300  
ggcaagagcg tgcagagctt ggaacgagcc tgccgggtag cagaacaggc agccaatgat  
360  
ctgcgagcac aggtgacaga actggaggat gagctgacag cggccgagga tgccaagctg  
420  
cgtctggagg tgactgtgca ggctctcaag actcagcatg agcgtgacct gcagggccgt  
480  
gatgaggctg gtgaagagag gcgaggcag ctggccaagc agctgagaga tgcagaggctg  
540  
gagcgggatg aggagcggaa gcagcgcaact ctggccgtgg ctgcccga gaagctggag  
600  
ggagagctgg aggagctgaa ggctcagatg gcctctgccg gccagggcaa ggaggaggcg  
660  
gtgaagcagc ttcgcaagat gcaggcccag atgaaggagc tatggcggga ggtggaggag  
720  
acacgcacct cccgggagga gatcttctcc cagaatcggg aaagtga aaa ggcctcaag  
780  
ggcctggagg ctgaggtgct gcggctgcag gaggaactgg ccgcctcgga cgtgctcgg  
840  
cggcaggccc agcaggaccg ggatgagatg gcagatgagg tggccaatgg taaccttagc  
900  
aaggcagcca ttctggagga gaagcgtcag ctggaggggc gcctggggca gttggaggaa  
960  
gagctggagg aggagcagac anactcagag ctgctcaatg accgctaccg caagctgctc  
1020  
ctgcaggtag agtcactgac cacagagctg tcagctgagc gcagtttctc agccaaggca  
1080  
gagagcgggc ggcagcagct ggaacggcag atccaggagc tacggggacg cctgggtgag  
1140  
gaggatgctg gggcccgtgc ccgccacaag atgaccattg ctgcccttga gtctaagttg  
1200  
gcccaggctg aggagcagct agagcaagag accagagagc gcaccccttc tggaaagctg  
1260  
gtgcccaaaa gtaagaagcg gtttaaagag gtggtgctcc aggtggagga ggagcggagg  
1320  
gtggctgacc agctccggga ccagctggag aagggaacc ttcgagtaa gcagctgaag  
1380

cggcagctgg aggaggccga ggaggaggca tcccgg  
1416

<210> 1966  
<211> 472  
<212> PRT  
<213> Homo sapiens

<400> 1966  
Arg Leu Gly Gln Glu Leu Asp Asp Ala Thr Met Asp Leu Glu Gln Gln  
1 5 10 15  
Arg Gln Leu Val Ser Thr Leu Glu Lys Lys Gln Arg Lys Phe Asp Gln  
20 25 30  
Leu Leu Ala Glu Glu Lys Ala Ala Val Leu Arg Ala Val Glu Glu Arg  
35 40 45  
Glu Arg Ala Glu Ala Glu Gly Arg Glu Arg Glu Ala Arg Ala Leu Ser  
50 55 60  
Leu Thr Arg Ala Leu Glu Glu Glu Gln Glu Ala Arg Glu Glu Leu Glu  
65 70 75 80  
Arg Gln Asn Arg Ala Leu Arg Ala Glu Leu Glu Ala Leu Leu Ser Ser  
85 90 95  
Lys Asp Asp Val Gly Lys Ser Val His Glu Leu Glu Arg Ala Cys Arg  
100 105 110  
Val Ala Glu Gln Ala Ala Asn Asp Leu Arg Ala Gln Val Thr Glu Leu  
115 120 125  
Glu Asp Glu Leu Thr Ala Ala Glu Asp Ala Lys Leu Arg Leu Glu Val  
130 135 140  
Thr Val Gln Ala Leu Lys Thr Gln His Glu Arg Asp Leu Gln Gly Arg  
145 150 155 160  
Asp Glu Ala Gly Glu Glu Arg Arg Arg Gln Leu Ala Lys Gln Leu Arg  
165 170 175  
Asp Ala Glu Val Glu Arg Asp Glu Glu Arg Lys Gln Arg Thr Leu Ala  
180 185 190  
Val Ala Ala Arg Lys Lys Leu Glu Gly Glu Leu Glu Glu Leu Lys Ala  
195 200 205  
Gln Met Ala Ser Ala Gly Gln Gly Lys Glu Glu Ala Val Lys Gln Leu  
210 215 220  
Arg Lys Met Gln Ala Gln Met Lys Glu Leu Trp Arg Glu Val Glu Glu  
225 230 235 240  
Thr Arg Thr Ser Arg Glu Glu Ile Phe Ser Gln Asn Arg Glu Ser Glu  
245 250 255  
Lys Arg Leu Lys Gly Leu Glu Ala Glu Val Leu Arg Leu Gln Glu Glu  
260 265 270  
Leu Ala Ala Ser Asp Arg Ala Arg Arg Gln Ala Gln Gln Asp Arg Asp  
275 280 285  
Glu Met Ala Asp Glu Val Ala Asn Gly Asn Leu Ser Lys Ala Ala Ile  
290 295 300  
Leu Glu Glu Lys Arg Gln Leu Glu Gly Arg Leu Gly Gln Leu Glu Glu  
305 310 315 320  
Glu Leu Glu Glu Glu Gln Thr Xaa Ser Glu Leu Leu Asn Asp Arg Tyr  
325 330 335  
Arg Lys Leu Leu Gln Val Glu Ser Leu Thr Thr Glu Leu Ser Ala  
340 345 350  
Glu Arg Ser Phe Ser Ala Lys Ala Glu Ser Gly Arg Gln Gln Leu Glu

|                                 |                                 |                     |
|---------------------------------|---------------------------------|---------------------|
| 355                             | 360                             | 365                 |
| Arg Gln Ile Gln Glu Leu         | Arg Gly Arg Leu Gly             | Glu Glu Asp Ala Gly |
| 370                             | 375                             | 380                 |
| Ala Arg Ala Arg His Lys Met Thr | Ile Ala Ala Leu Glu Ser Lys Leu |                     |
| 385                             | 390                             | 395                 |
| Ala Gln Ala Glu Glu Gln Leu     | Glu Gln Thr Arg Glu Arg Ile Leu | 400                 |
| 405                             | 410                             | 415                 |
| Ser Gly Lys Leu Val Pro Lys Ser | Lys Lys Arg Phe Lys Glu Val Val |                     |
| 420                             | 425                             | 430                 |
| Leu Gln Val Glu Glu Glu Arg Arg | Val Ala Asp Gln Leu Arg Asp Gln |                     |
| 435                             | 440                             | 445                 |
| Leu Glu Lys Gly Asn Leu Arg Val | Lys Gln Leu Lys Arg Gln Leu Glu |                     |
| 450                             | 455                             | 460                 |
| Glu Ala Glu Glu Glu Ala Ser Arg |                                 |                     |
| 465                             | 470                             |                     |

<210> 1967  
 <211> 401  
 <212> DNA  
 <213> Homo sapiens

<400> 1967  
 aaatttgaat cctggaaagc tgatctcgat aagtcgtttg tcgagctggt tgcggcggtg  
 60  
 ccgacgcgcc taatttggat cgtgcagtaa gagcttctcc attcctcggc gccaaaggga  
 120  
 tgcacacat ctgcgggcca gtcagctccc ctgggcttgc actcgtcgga gatgctggcc  
 180  
 ttgcaccaga tcctctgtgg ggcgtcgggt gtggctgggc attccagtcg gcagcttggg  
 240  
 tagtggactg taccggatct catttggtg accggaccgc cttagatagg gcgcttcgca  
 300  
 gttatcatcg ataccaccgg cattctcttg ggtggcatga acgcctcatc tctagatatg  
 360  
 caaacggccg gggttttcat gcgctcgaga agctgatgct g  
 401

<210> 1968  
 <211> 94  
 <212> PRT  
 <213> Homo sapiens

|   |
|---|
| <400> 1968  |
| Met His His Ile Ser Arg Pro Val Ser Ser Pro Gly Leu Ala Leu Val |
| 1 5 10 15   |
| Gly Asp Ala Gly Leu Ala Pro Asp Pro Leu Trp Gly Val Gly Cys Gly |
| 20 25 30  |
| Trp Ala Phe Gln Ser Ala Ala Trp Leu Val Asp Cys Thr Gly Ser His |
| 35 40 45  |
| Leu Ala Asp Arg Thr Ala Leu Asp Arg Ala Leu Arg Ser Tyr His Arg |
| 50 55 60  |
| Tyr His Arg His Ser Leu Gly Trp His Glu Arg Leu Ile Ser Arg Tyr |
| 65 70 75 80   |
| Ala Asn Gly Arg Gly Phe His Ala Leu Glu Lys Leu Met Leu         |

85

90

<210> 1969  
 <211> 464  
 <212> DNA  
 <213> Homo sapiens

<400> 1969  
 nncatcgacg cgcactggac tcattctgggt gacggcccac agatggacac tctgcgcgag  
 60  
 gaggtcgccg ttcaccgctg caccgatgct gtcaccctgc tcggtcacgt cgccaacacc  
 120  
 caggtcatgg cgaccagcgc tgattctcaa cgcgcagtat tcgtcaacct ctctctctcg  
 180  
 gaaggacttc ctgtatcaat gatggagggt gcttccctcg gtatcccat tatcgcgact  
 240  
 ggcgtcgccg gagtaggaga aatcgtctcg tctgacaacg ggcattctatt gcctgccgag  
 300  
 ttcaccgaca cccaggcatc tgacgcgtta gtgcagctgg cagctctgtc tgaggacgag  
 360  
 taccagcagg tgtgtcaggc ctcccgccag gtgtgggaag aaaagttccg cgcctctgtc  
 420  
 gtctaccccg aattctgtcg cgagtgtctg ggcgacgtg atca  
 464

<210> 1970  
 <211> 154  
 <212> PRT  
 <213> Homo sapiens

<400> 1970  
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 20 25 30  
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 35 40 45  
 Leu Lys Pro Ser Val Phe Val Asn Leu Ser Ser Ser Glu Gly Leu Pro  
 50 55 60  
 Val Ser Met Met Glu Val Ala Ser Leu Gly Ile Pro Ile Ile Ala Thr  
 65 70 75 80  
 Gly Val Gly Gly Val Gly Glu Ile Val Ser Ser Asp Asn Gly His Leu  
 85 90 95  
 Leu Pro Ala Glu Phe Thr Asp Thr Gln Ala Ser Asp Ala Leu Val Gln  
 100 105 110  
 Leu Ala Arg Leu Ser Glu Asp Glu Tyr Gln Gln Val Cys Gln Ala Ser  
 115 120 125  
 Arg Gln Val Trp Glu Glu Lys Phe Arg Ala Ser Val Val Tyr Pro Glu  
 130 135 140  
 Phe Cys Arg Glu Cys Trp Gly Asp Ala Asp  
 145 150

<210> 1971  
 <211> 520

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1971

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120
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180
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520

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&lt;210&gt; 1972

&lt;211&gt; 118

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1972

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Met Glu Tyr Asn Ala Ser Asn Ile Ser Asn Ser Arg His Asp Ser Asp
 1             5             10             15
Glu Ile Ser Gly Lys Met Asn Thr Tyr Met Asn Ser Thr Thr Ser Lys
 20             25             30
Lys Asp Thr Gly Val Gln Thr Asp Asp Leu Asn Ile Gly Ile Phe Thr
 35             40             45
Asn Ala Glu Ser His Cys Gly Ser Leu Met Glu Arg Asp Ile Thr Asn
 50             55             60
Cys Ser Ser Pro Glu Ile Ser Ala Glu Leu Ile Gly Gln Phe Ser Thr
 65             70             75             80
Lys Lys Asn Lys Gln Glu Leu Thr Gln Asp Lys Gly Ala Ser Leu Glu
 85             90             95
Lys Glu Asn Asn Arg Cys Asn Asp Gln Cys Asn Gln Phe Thr Arg Ile
100             105             110
Glu Lys Gln Thr Lys Gln
115

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&lt;210&gt; 1973

&lt;211&gt; 331

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1973

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acgcgtacct atgcccagcg catggcggat cagttgaccg cggcactagg cagctactta
60

```



tccgcagggtc aaaagaaatc ggacggcctc ggatccttct tcgtggccac tacccttgaa  
 120  
 gagctacaag cgatgaacag cgatactcgc ttcaccacga gcgtgggaat cgacctatcc  
 180  
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 240  
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 331

<210> 1974  
 <211> 103  
 <212> PRT  
 <213> Homo sapiens

<400> 1974  
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 Glu Glu Leu Gln Ala Met Asn Ser Asp Thr Arg Phe Thr Thr Ser Val  
 35 40 45  
 Gly Ile Asp Leu Ser Pro Ala Arg Ser Phe Ser Ala Trp Ala Leu Arg  
 50 55 60  
 Gly Thr Thr Phe Ser Ala Pro Ser Met Thr Lys Ala Ser Arg Ser Ser  
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<210> 1975  
 <211> 370  
 <212> DNA  
 <213> Homo sapiens

<400> 1975  
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 370

<210> 1976

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<211> 121
<212> PRT
<213> Homo sapiens
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&lt;400&gt; 1978

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Val Val Ala Pro Phe Ser Ser Ser Thr Ser Leu Met Phe Gln Leu Glu
          20           25           30
Pro Leu Pro Ala Val Ser Pro Thr Ser Phe Ile Pro Pro Val Thr Arg
          35           40           45
Glu Val Gln Ile Phe Gln Pro Gly His Cys Leu Pro Ser Arg Leu Ala
          50           55           60
Pro Pro Val His Leu Leu Cys Ser Ser Leu Cys Asn Ser Leu Ala Ala
65           70           75           80
Cys Leu Leu Ser Pro Leu Thr Gln Leu Leu Thr Cys Pro Thr Pro Ala
          85           90           95
Gln Pro Thr Ser Ser
          100

```

&lt;210&gt; 1979

&lt;211&gt; 5530

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1979

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120
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240
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300
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360
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540
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960

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 5530

&lt;210&gt; 1980

&lt;211&gt; 929

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1980

Met Leu Leu Gly Trp Ala Ser Leu Leu Leu Cys Ala Phe Arg Leu Pro

|   |     |     |     |
|---|-----|-----|-----|
| 1   | 5   | 10  | 15  |
| Leu Ala Ala Val Gly Pro Ala Ala Thr Pro Ala Gln Asp Lys Ala Gly |     |     |     |
| 20  | 25  | 30  |     |
| Gln Pro Pro Thr Ala Ala Ala Ala Ala Gln Pro Arg Arg Arg Gln Gly |     |     |     |
| 35  | 40  | 45  |     |
| Glu Glu Val Gln Glu Arg Ala Glu Pro Pro Gly His Pro His Pro Leu |     |     |     |
| 50  | 55  | 60  |     |
| Ala Gln Arg Arg Arg Ser Lys Gly Leu Val Gln Asn Ile Asp Gln Leu |     |     |     |
| 65  | 70  | 75  | 80  |
| Tyr Ser Gly Gly Gly Lys Val Gly Tyr Leu Val Tyr Ala Gly Gly Arg |     |     |     |
| 85  | 90  | 95  |     |
| Arg Phe Leu Leu Asp Leu Glu Arg Asp Gly Ser Val Gly Ile Ala Gly |     |     |     |
| 100   | 105 | 110 |     |
| Phe Val Pro Ala Gly Gly Gly Thr Ser Ala Pro Trp Arg His Arg Ser |     |     |     |
| 115   | 120 | 125 |     |
| His Cys Phe Tyr Arg Gly Thr Val Asp Ala Ser Pro Arg Ser Leu Ala |     |     |     |
| 130   | 135 | 140 |     |
| Val Phe Asp Leu Cys Gly Gly Leu Asp Gly Phe Phe Ala Val Lys His |     |     |     |
| 145   | 150 | 155 | 160 |
| Ala Arg Tyr Thr Leu Lys Pro Leu Leu Arg Gly Pro Trp Ala Glu Glu |     |     |     |
| 165   | 170 | 175 |     |
| Glu Lys Gly Arg Val Tyr Gly Asp Gly Ser Ala Arg Ile Leu His Val |     |     |     |
| 180   | 185 | 190 |     |
| Tyr Thr Arg Arg Ala Ser Ala Ser Arg Pro Cys Arg Arg Ala Pro Ala |     |     |     |
| 195   | 200 | 205 |     |
| Ala Lys Pro Pro Arg Pro His Arg Arg Pro Thr Ser Met Leu Arg Arg |     |     |     |
| 210   | 215 | 220 |     |
| Thr Ala Thr Arg Ala Asp Ala Gln His Ala Ser Gln Leu Leu Asp Gln |     |     |     |
| 225   | 230 | 235 | 240 |
| Ser Ala Leu Ser Pro Ala Gly Gly Ser Gly Pro Gln Thr Trp Trp Arg |     |     |     |
| 245   | 250 | 255 |     |
| Arg Arg Arg Arg Ser Ile Ser Arg Ala Arg Gln Val Glu Leu Leu Leu |     |     |     |
| 260   | 265 | 270 |     |
| Val Ala Asp Ala Ser Met Ala Arg Leu Tyr Gly Arg Gly Leu Gln His |     |     |     |
| 275   | 280 | 285 |     |
| Tyr Leu Leu Thr Leu Ala Ser Ile Ala Asn Arg Leu Tyr Ser His Ala |     |     |     |
| 290   | 295 | 300 |     |
| Ser Ile Glu Asn His Ile Arg Leu Ala Val Val Lys Val Val Val Leu |     |     |     |
| 305   | 310 | 315 | 320 |
| Gly Asp Lys Asp Lys Ser Leu Glu Val Ser Lys Asn Ala Ala Thr Thr |     |     |     |
| 325   | 330 | 335 |     |
| Leu Lys Asn Phe Cys Lys Trp Gln His Gln His Asn Gln Leu Gly Asp |     |     |     |
| 340   | 345 | 350 |     |
| Asp His Glu Glu His Tyr Asp Ala Ala Ile Leu Phe Thr Arg Glu Asp |     |     |     |
| 355   | 360 | 365 |     |
| Leu Cys Gly His His Ser Cys Asp Thr Leu Gly Met Ala Asp Val Gly |     |     |     |
| 370   | 375 | 380 |     |
| Thr Ile Cys Ser Pro Glu Arg Ser Cys Ala Val Ile Glu Asp Asp Gly |     |     |     |
| 385   | 390 | 395 | 400 |
| Leu His Ala Ala Phe Thr Val Ala His Glu Ile Gly His Leu Leu Gly |     |     |     |
| 405   | 410 | 415 |     |
| Leu Ser His Asp Asp Ser Lys Phe Cys Glu Glu Thr Phe Gly Ser Thr |     |     |     |
| 420   | 425 | 430 |     |
| Glu Asp Lys Arg Leu Met Ser Ser Ile Leu Thr Ser Ile Asp Ala Ser |     |     |     |

1497



865                                      870                                      875                                      880  
 Gly Pro Trp Leu Ala Cys Ser Arg Thr Cys Asp Thr Gly Trp His Thr  
    885                                      890                                      895  
 Arg Thr Val Gln Cys Gln Asp Gly Asn Arg Lys Leu Ala Lys Gly Cys  
    900                                      905                                      910  
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<210> 1981  
 <211> 327  
 <212> DNA  
 <213> Homo sapiens

<400> 1981  
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 327

<210> 1982  
 <211> 107  
 <212> PRT  
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<400> 1982  
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   20  25  30  
 Gly Val Asn Pro Arg Gly Val Asp Asn Arg Thr Ser Met Ala Val Phe  
   35  40  45  
 Ser Pro Pro Lys Ala Ala Gly Gly Gly Arg Cys Pro Gly Pro Cys Arg  
   50  55  60  
 Ile Met Ala Trp Pro Gly Gln Arg Ala Ser Ser Ser Gly Arg Gly Arg  
   65  70  75  80  
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   85  90  95  
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<210> 1983  
 <211> 383  
 <212> DNA  
 <213> Homo sapiens

&lt;400&gt; 1983

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 180  
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 240  
 gaagttaatc gtgcagggtg agtcgttaat aaattcgccg gcgatgcagt actagccatt  
 300  
 tttaatgtcc cgcacgatca cccggatcca gcaggcgcat cactctattg cgctcgggta  
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 gttatgaacc gtttcgatca tga  
 383

&lt;210&gt; 1984

&lt;211&gt; 127

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1984

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Asn | Asn | Met | Val | His | Glu | Leu | Arg | Glu | Gln | Gln | His | Ile | Lys | Asp |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Leu | Phe | Arg | Gln | His | Val | Gly | Ser | Lys | Ile | Ala | Asp | Gln | Ala | Leu | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
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&lt;213&gt; Homo sapiens

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| Ala Gln Ser Gln Ser Gln Ala Asp Glu Glu Glu Glu Asp Asp Asp Phe |  |     |  |     |
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| Gly Val Glu Tyr Leu Leu Ala Arg Asp Glu Glu Gln Ser Glu Ala Asp |  |     |  |     |
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| Ala Gly Ser Gly Pro Pro Thr Pro Gly Pro Thr Thr Leu Gly Pro Lys |  |     |  |     |
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| Lys Glu Ile Thr Asp Ile Ala Ala Ala Ala Glu Ser Leu Gln Pro Lys |  |     |  |     |
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| Gly Tyr Thr Leu Ala Thr Thr Gln Val Lys Thr Pro Ile Pro Leu Leu |  |     |  |     |
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| Leu Arg Gly Gln Leu Arg Glu Tyr Gln His Ile Gly Leu Asp Trp Leu |  |     |  |     |
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| Val Thr Met Tyr Glu Lys Lys Leu Asn Gly Ile Leu Ala Asp Glu Met |  |     |  |     |
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| Gly Leu Gly Lys Thr Ile Gln Thr Ile Ser Leu Leu Ala His Leu Ala |  |     |  |     |
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| Cys Glu Lys Gly Asn Trp Gly Pro His Leu Ile Ile Val Pro Thr Ser |  |     |  |     |
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| Val Met Leu Asn Trp Glu Met Glu Leu Lys Arg Trp Cys Pro Ser Phe |  |     |  |     |
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| Lys Ile Leu Thr Tyr Tyr Gly Ala Gln Lys Glu Arg Lys Leu Lys Arg |  |     |  |     |
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| Gln Gly Trp Thr Lys Pro Asn Ala Phe His Val Cys Ile Thr Ser Tyr |  |     |  |     |
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| Lys Leu Val Leu Gln Asp His Gln Ala Phe Arg Arg Lys Asn Trp Arg |  |     |  |     |
|   |  | 530 |  | 535 |
| Tyr Leu Ile Leu Asp Glu Ala Gln Asn Ile Lys Asn Phe Lys Ser Gln |  |     |  |     |
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| Arg Trp Gln Ser Leu Leu Asn Phe Asn Ser Gln Arg Arg Leu Leu Leu |  |     |  |     |
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| Trp Phe Ser Asn Pro Leu Thr Gly Met Ile Glu Gly Ser Gln Glu Tyr |  |     |  |     |
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| Asn Glu Gly Leu Val Lys Arg Leu His Lys Val Leu Arg Pro Phe Leu |  |     |  |     |
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| Leu Arg Arg Val Lys Val Asp Val Glu Lys Gln Met Pro Lys Lys Tyr |  |     |  |     |
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 Thr Val Val Phe Tyr Asp Ser Asp Trp Asn Pro Thr Met Asp Ala Gln  
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                                  1955                      1960                      1965  
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                                  1970                      1975                      1980  
 Ala Leu Cys Arg Ala Glu Asp Glu Glu Asp Ile Arg Ala Ala Thr Gln  
 1985                      1990                      1995                      2000  
 Ala Lys Ala Glu Gln Val Ala Glu Leu Ala Glu Phe Asn Glu Asn Asp  
                                  2005                      2010                      2015  
 Gly Phe Pro Ala Gly Glu Gly Glu Glu Ala Gly Arg Pro Gly Ala Glu

|      |      |     |      |     |      |     |     |     |     |     |     |     |     |      |     |
|------|------|-----|------|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|
|      | 2020 |     | 2025 |     | 2030 |     |     |     |     |     |     |     |     |      |     |
| Asp  | Glu  | Glu | Met  | Ser | Arg  | Ala | Glu | Gln | Glu | Ile | Ala | Ala | Leu | Val  | Glu |
|      | 2035 |     | 2040 |     | 2045 |     |     |     |     |     |     |     |     |      |     |
| Gln  | Leu  | Thr | Pro  | Ile | Glu  | Arg | Tyr | Ala | Met | Lys | Phe | Leu | Glu | Ala  | Ser |
|      | 2050 |     | 2055 |     | 2060 |     |     |     |     |     |     |     |     |      |     |
| Leu  | Glu  | Glu | Val  | Ser | Arg  | Glu | Glu | Leu | Lys | Gln | Ala | Glu | Glu | Gln  | Val |
| 2065 |      |     | 2070 |     | 2075 |     |     |     |     |     |     |     |     | 2080 |     |
| Glu  | Ala  | Ala | Arg  | Lys | Asp  | Leu | Asp | Gln | Ala | Lys | Glu | Glu | Val | Phe  | Arg |
|      |      |     | 2085 |     | 2090 |     |     |     |     |     |     |     |     | 2095 |     |
| Leu  | Pro  | Gln | Glu  | Glu | Glu  | Gly | Pro | Gly | Ala | Gly | Asp | Glu | Ser | Ser  |     |
|      | 2100 |     | 2105 |     | 2110 |     |     |     |     |     |     |     |     |      |     |
| Cys  | Gly  | Thr | Gly  | Gly | Gly  | Thr | His | Arg | Arg | Ser | Lys | Lys | Ala | Lys  | Ala |
|      | 2115 |     | 2120 |     | 2125 |     |     |     |     |     |     |     |     |      |     |
| Pro  | Glu  | Arg | Pro  | Gly | Thr  | Arg | Val | Ser | Glu | Arg | Leu | Arg | Gly | Ala  | Arg |
|      | 2130 |     | 2135 |     | 2140 |     |     |     |     |     |     |     |     |      |     |
| Ala  | Glu  | Thr | Gln  | Gly | Ala  | Asn | His | Thr | Pro | Val | Ile | Ser | Ala | His  | Gln |
| 2145 |      |     | 2150 |     | 2155 |     |     |     |     |     |     |     |     | 2160 |     |
| Thr  | Arg  | Ser | Thr  | Thr | Thr  | Pro | Pro | Arg | Cys | Ser | Pro | Ala | Arg | Glu  | Arg |
|      |      |     | 2165 |     | 2170 |     |     |     |     |     |     |     |     | 2175 |     |
| Val  | Pro  | Arg | Pro  | Ala | Pro  | Arg | Pro | Arg | Pro | Thr | Pro | Ala | Ser | Ala  | Pro |
|      | 2180 |     | 2185 |     | 2190 |     |     |     |     |     |     |     |     |      |     |
| Ala  | Ala  | Ile | Pro  | Ala | Leu  | Val | Pro | Val | Pro | Val | Ser | Ala | Pro | Val  | Pro |
|      | 2195 |     | 2200 |     | 2205 |     |     |     |     |     |     |     |     |      |     |
| Ile  | Ser  | Ala | Pro  | Asn | Pro  | Ile | Thr | Ile | Leu | Pro | Val | His | Ile | Leu  | Pro |
|      | 2210 |     | 2215 |     | 2220 |     |     |     |     |     |     |     |     |      |     |
| Ser  | Pro  | Pro | Pro  | Pro | Ser  | Gln | Ile | Pro | Pro | Cys | Ser | Ser | Pro | Ala  | Cys |
| 2225 |      |     | 2230 |     | 2235 |     |     |     |     |     |     |     |     | 2240 |     |
| Thr  | Pro  | Pro | Pro  | Ala | Cys  | Thr | Pro | Pro | Pro | Ala | His | Thr | Pro | Pro  | Pro |
|      |      |     | 2245 |     | 2250 |     |     |     |     |     |     |     |     | 2255 |     |
| Ala  | Gln  | Thr | Cys  | Leu | Val  | Thr | Pro | Ser | Ser | Pro | Leu | Leu | Leu | Gly  | Pro |
|      | 2260 |     | 2265 |     | 2270 |     |     |     |     |     |     |     |     |      |     |
| Pro  | Ser  | Val | Pro  | Ile | Ser  | Ala | Ser | Val | Thr | Asn | Leu | Pro | Leu | Gly  | Leu |
|      | 2275 |     | 2280 |     | 2285 |     |     |     |     |     |     |     |     |      |     |
| Arg  | Pro  | Glu | Ala  | Glu | Leu  | Cys | Ala | Gln | Ala | Leu | Ala | Ser | Pro | Glu  | Ser |
|      | 2290 |     | 2295 |     | 2300 |     |     |     |     |     |     |     |     |      |     |
| Leu  | Glu  | Leu | Ala  | Ser | Val  | Ala | Ser | Ser | Glu | Thr | Ser | Ser | Leu | Ser  | Leu |
| 2305 |      |     | 2310 |     | 2315 |     |     |     |     |     |     |     |     | 2320 |     |
| Val  | Pro  | Pro | Lys  | Asp | Leu  | Leu | Pro | Val | Ala | Val | Glu | Ile | Leu | Pro  | Val |
|      |      |     | 2325 |     | 2330 |     |     |     |     |     |     |     |     | 2335 |     |
| Ser  | Glu  | Lys | Asn  | Leu | Ser  | Leu | Thr | Pro | Ser | Ala | Pro | Ser | Leu | Thr  | Leu |
|      | 2340 |     | 2345 |     | 2350 |     |     |     |     |     |     |     |     |      |     |
| Glu  | Ala  | Gly | Ser  | Ile | Pro  | Asn | Gly | Gln | Glu | Gln | Glu | Ala | Pro | Asp  | Ser |
|      | 2355 |     | 2360 |     | 2365 |     |     |     |     |     |     |     |     |      |     |
| Ala  | Glu  | Gly | Thr  | Thr | Leu  | Thr | Val | Leu | Pro | Glu | Gly | Glu | Glu | Leu  | Pro |
|      | 2370 |     | 2375 |     | 2380 |     |     |     |     |     |     |     |     |      |     |
| Leu  | Cys  | Val | Ser  | Glu | Ser  | Asn | Gly | Leu | Glu | Leu | Pro | Pro | Ser | Ala  | Ala |
| 2385 |      |     | 2390 |     | 2395 |     |     |     |     |     |     |     |     | 2400 |     |
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|      |      |     | 2405 |     | 2410 |     |     |     |     |     |     |     |     | 2415 |     |
| Glu  | Leu  | Thr | Glu  | Ala | Lys  | Thr | Pro | Thr | Ser | Ser | Pro | Glu | Lys | Pro  | Gln |
|      | 2420 |     | 2425 |     | 2430 |     |     |     |     |     |     |     |     |      |     |
| Glu  | Leu  | Val | Thr  | Ala | Glu  | Val | Ala | Ala | Pro | Ser | Thr | Ser | Ser | Ser  | Ala |
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| Thr  | Ser  | Ser | Pro  | Glu | Gly  | Pro | Ser | Pro | Ala | Arg | Pro | Pro | Arg | Arg  | Arg |



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| Gln Pro Pro Gly Pro Lys Val Leu Arg Lys Leu Pro Gly Arg Leu Val |      | 2480 |
|   | 2485 | 2490 |
| Thr Val Val Glu Glu Lys Glu Leu Val Arg Arg Arg Arg Gln Gln Arg |      | 2495 |
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| Gly Ala Ala Ser Thr Leu Val Pro Gly Val Ser Glu Thr Ser Ala Ser |      | 2510 |
|   | 2515 | 2520 |
| Pro Gly Ser Pro Ser Val Arg Ser Met Ser Gly Pro Glu Ser Ser Pro |      | 2525 |
|   | 2530 | 2535 |
| Pro Ile Gly Gly Pro Cys Glu Ala Ala Pro Ser Ser Ser Leu Pro Thr |      | 2540 |
| 2545  | 2550 | 2555 |
| Pro Pro Gln Gln Pro Phe Ile Ala Arg Arg His Ile Glu Leu Gly Val |      | 2560 |
|   | 2565 | 2570 |
| Thr Gly Gly Gly Ser Pro Glu Asn Gly Asp Gly Ala Leu Leu Ala Ile |      | 2575 |
|   | 2580 | 2585 |
| Thr Pro Pro Ala Val Lys Arg Arg Arg Gly Arg Pro Pro Lys Lys Asn |      | 2590 |
|   | 2595 | 2600 |
| Arg Ser Pro Ala Asp Ala Gly Arg Gly Val Asp Glu Ala Pro Ser Ser |      | 2605 |
|   | 2610 | 2615 |
| Thr Leu Lys Gly Lys Thr Asn Gly Ala Asp Pro Val Pro Gly Pro Glu |      | 2620 |
| 2625  | 2630 | 2635 |
| Thr Leu Ile Val Ala Asp Pro Val Leu Glu Pro Gln Leu Ile Pro Gly |      | 2640 |
|   | 2645 | 2650 |
| Pro Gln Pro Leu Gly Pro Gln Pro Val His Arg Pro Asn Pro Leu Leu |      | 2655 |
|   | 2660 | 2665 |
| Ser Pro Val Glu Lys Arg Arg Arg Gly Arg Pro Pro Lys Ala Arg Asp |      | 2670 |
|   | 2675 | 2680 |
| Leu Pro Ile Pro Gly Thr Ile Ser Ser Ala Gly Asp Gly Asn Ser Glu |      | 2685 |
|   | 2690 | 2695 |
| Ser Arg Thr Gln Pro Pro Pro His Pro Ser Pro Leu Thr Pro Leu Pro |      | 2700 |
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| Pro Leu Leu Val Cys Pro Thr Ala Thr Val Ala Asn Thr Val Thr Thr |      | 2720 |
|   | 2725 | 2730 |
| Val Thr Ile Ser Thr Ser Pro Pro Lys Arg Lys Arg Gly Arg Pro Pro |      | 2735 |
|   | 2740 | 2745 |
| Lys Asn Pro Pro Ser Pro Arg Pro Ser Gln Leu Pro Val Leu Asp Arg |      | 2750 |
|   | 2755 | 2760 |
| Asp Ser Thr Ser Val Leu Glu Ser Cys Gly Leu Gly Arg Arg Gln     |      | 2765 |
|   | 2770 | 2775 |
| Pro Gln Gly Gln Gly Glu Ser Glu Gly Ser Ser Ser Asp Glu Asp Gly |      | 2780 |
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| Ser Arg Pro Leu Thr Arg Leu Ala Arg Leu Arg Leu Glu Ala Glu Gly |      | 2800 |
|   | 2805 | 2810 |
| Met Arg Gly Arg Lys Ser Gly Gly Ser Met Val Val Ala Val Ile Gln |      | 2815 |
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| Asp Asp Leu Asp Leu Ala Asp Ser Gly Pro Gly Gly Leu Glu Leu Thr |      | 2830 |
|   | 2835 | 2840 |
| Pro Pro Val Val Ser Leu Thr Pro Lys Leu Arg Ser Thr Arg Leu Arg |      | 2845 |
|   | 2850 | 2855 |
| Pro Gly Ser Leu Val Pro Pro Leu Glu Thr Glu Lys Leu Pro Arg Lys |      | 2860 |
| 2865  | 2870 | 2875 |
| Arg Ala Gly Ala Pro Val Gly Gly Ser Pro Gly Leu Ala Lys Arg Gly |      | 2880 |

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| Arg | Leu  | Gln | Pro  | Pro | Ser  |
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| Arg | Arg  | Arg | Pro  | Gly | Pro  |
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| Asp | Gln  | Arg | Ile  | Leu | Arg  |
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<210> 1992

<211> 733

<212> PRT

<213> Homo sapiens

<400> 1992

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| Thr | Pro | Ala | Glu | Gly | Leu | Leu | Ala | Ala | Gly | Lys | Leu | Leu | Gly | Ser | Arg |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Gly | Pro | Arg | Leu | Leu | Pro | Pro | Glu | Cys | Arg | Ser | Val | Ala | Cys | Val | Gln |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ala | Leu | Lys | Gly | Ser | Lys | Lys | Leu | Val | Leu | Ser | Val | Tyr | Ser | Ala | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Arg | Ile | Pro | Gly | Gly | Tyr | Val | Thr | Asn | His | Ile | Tyr | Thr | Trp | Val | Asp |
| 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |
| Pro | Gln | Gly | Arg | Ser | Ile | Ser | Pro | Pro | Ser | Gly | Leu | Pro | Gln | Pro | His |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Gly | Gly | Ala | Leu | Arg | Gln | Gln | Glu | Gly | Asp | Arg | Arg | Ser | Thr | Leu | His |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Leu | Leu | Gln | Gly | Gly | Asp | Glu | Lys | Lys | Val | Asn | Leu | Val | Leu | Gly | Asp |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Gly | Arg | Ser | Leu | Gly | Leu | Thr | Ile | Arg | Gly | Gly | Ala | Glu | Tyr | Gly | Leu |
|     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |     |
| Gly | Ile | Tyr | Ile | Thr | Gly | Val | Asp | Pro | Gly | Ser | Glu | Ala | Glu | Gly | Ser |
| 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |     |
| Gly | Leu | Lys | Val | Gly | Asp | Gln | Ile | Leu | Glu | Val | Asn | Gly | Arg | Ser | Phe |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Leu | Asn | Ile | Leu | His | Asp | Glu | Ala | Val | Arg | Leu | Leu | Lys | Ser | Ser | Arg |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |
| His | Leu | Ile | Leu | Thr | Val | Lys | Asp | Val | Gly | Arg | Leu | Pro | His | Ala | Arg |
|     | 180 |     |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Thr | Thr | Val | Asp | Glu | Thr | Lys | Trp | Ile | Ala | Ser | Ser | Arg | Ile | Arg | Glu |
|     | 195 |     |     |     |     | 200 |     |     |     |     |     | 205 |     |     |     |
| Thr | Met | Ala | Asn | Ser | Ala | Gly | Phe | Leu | Gly | Asp | Leu | Thr | Thr | Glu | Gly |
| 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |     |
| Ile | Asn | Lys | Pro | Gly | Phe | Tyr | Lys | Gly | Pro | Ala | Gly | Ser | Gln | Val | Thr |
| 225 |     |     |     | 230 |     |     |     |     |     | 235 |     |     |     | 240 |     |
| Leu | Ser | Ser | Leu | Gly | Asn | Gln | Thr | Arg | Val | Leu | Leu | Glu | Glu | Gln | Ala |
|     |     |     | 245 |     |     |     |     | 250 |     |     |     |     |     | 255 |     |
| Arg | His | Leu | Leu | Asn | Glu | Gln | Glu | His | Thr | Thr | Met | Ala | Tyr | Tyr | Leu |

1518

|   |     |     |
|---|-----|-----|
| 690   | 695 | 700 |
| Glu Ala Ala Arg Ile Ile Ala Glu Ala Phe Lys Thr Lys Asp Arg Asp |     |     |
| 705   | 710 | 715 |
| Tyr Ile Asp Phe Leu Val Thr Glu Phe Asn Val Met Leu             |     | 720 |
| 725   | 730 |     |

<210> 1993  
 <211> 957  
 <212> DNA  
 <213> Homo sapiens

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<210> 1994  
 <211> 224  
 <212> PRT  
 <213> Homo sapiens

<400> 1994  
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      50      55      60
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      65      70      75      80
Val Phe Gln Gln Gly Met Leu Val Pro Glu Leu Thr Ala Val Glu Asn
      85      90      95
Thr Ala Leu Pro Leu Met Leu Asn Gly Val Ser Gln Thr Asp Ala Val
      100      105      110
Arg Tyr Ala Thr Gln Trp Leu Glu Ser Met Gly Leu Gly Gly Met Glu
      115      120      125
Asp Arg Arg Ile Gly Gln Leu Ser Gly Gly Gln Ala Gln Arg Val Thr
      130      135      140
Ile Ala Arg Ser Gln Val Ile Asp Pro Ser Ile Val Phe Ala Asp Glu
      145      150      155      160
Pro Thr Gly Ala Leu Asp Ser Ala Thr Ala Val Glu Val Met Ala Ile
      165      170      175
Leu Leu Ser Ala Thr Thr Gly Arg Gly Arg Thr Leu Val Val Val Thr
      180      185      190
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Asp Gly Arg Ile Val Ser Asp His Val Arg His Ser Asp Gly Arg Trp
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&lt;210&gt; 1995

&lt;211&gt; 285

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1995

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285

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&lt;210&gt; 1996

&lt;211&gt; 59

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 1996

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His His His His Tyr Gln His His His His His Tyr His Leu Tyr
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His His His His His His His His His His Tyr His His His Ala
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<210> 1997  
 <211> 313  
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 <213> Homo sapiens

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<210> 1998  
 <211> 104  
 <212> PRT  
 <213> Homo sapiens

<400> 1998  
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 35 40 45  
 Gly Leu Phe Gly Pro Gly Thr Gly Ser Phe Leu Met Phe Leu Phe Val  
 50 55 60  
 Arg Phe Leu Arg Phe Asp Phe Leu His Ala Ser Ala Ala Ala Lys Val  
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<210> 1999  
 <211> 399  
 <212> DNA  
 <213> Homo sapiens

<400> 1999  
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<210> 2000

<211> 91

<212> PRT

<213> Homo sapiens

<400> 2000

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| Met | Asp | Leu | Thr | Leu | Ala | Asp | Pro | Glu | Ile | Val | Val | Asn | Asn | Gly | Asp |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Asp | His | Val | Ile | Met | Ser | Val | Lys | Ser | Lys | Thr | Met | Val | Gly | Gln | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Val | Asp | Tyr | Gly | Arg | Ile | Thr | Phe | Val | Asp | Met | Thr | Gly | Ser | Ile | Thr |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Gln | Gly | Gln | Asn | Asp | Ala | Ala | Gln | Val | Val | Gly | Thr | Asn | Val | Lys | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Asn | Ser | Gln | Ala | Val | Asp | Ala | Phe | Ala | Gly | Phe | Tyr | Gln | Ala | Gly | Lys |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |
| Pro | Met | Asp | Asp | Ile | Asp | Ser | Ser | Leu | Lys | Leu |     |     |     |     |     |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     |     |

<210> 2001

<211> 1434

<212> DNA

<213> Homo sapiens

<400> 2001

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 780  
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<210> 2002  
 <211> 79  
 <212> PRT  
 <213> Homo sapiens

<400> 2002  
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<210> 2003  
 <211> 688  
 <212> DNA  
 <213> Homo sapiens

<400> 2003

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 688

&lt;210&gt; 2004

&lt;211&gt; 172

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2004

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Met | Thr | Thr | Glu | Thr | Leu | Lys | Lys | Ile | Gln | Ile | Asp | Arg | Gln | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Phe | Ser | Asp | Val | Ile | Ala | Asp | Thr | Ile | Lys | Glu | Leu | Gln | Asp | Ser | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Thr | Tyr | Asn | Ser | Leu | Leu | Gln | Ala | Leu | Ser | Lys | Glu | Arg | Glu | Asn | Lys |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |
| Met | His | Phe | Tyr | Asp | Ile | Ile | Ser | Arg | Glu | Glu | Lys | Gly | Arg | Lys | Gln |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Ile | Ile | Ser | Leu | Gln | Lys | Gln | Leu | Ile | Asn | Phe | Lys | Lys | Glu | Trp | Gln |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Phe | Glu | Val | Gln | Ser | Gln | Asn | Glu | Tyr | Ile | Ala | Asn | Leu | Lys | Asp | Gln |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Leu | Gln | Glu | Met | Lys | Ala | Lys | Ser | Asn | Leu | Glu | Asn | Arg | Tyr | Met | Lys |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Thr | Asn | Thr | Glu | Leu | Gln | Ile | Ala | Gln | Thr | Gln | Lys | Lys | Cys | Asn | Arg |
|     |     | 115 |     |     |     | 120 |     |     |     |     |     | 125 |     |     |     |
| Thr | Glu | Glu | Leu | Leu | Val | Glu | Glu | Ile | Glu | Lys | Leu | Arg | Met | Lys | Thr |
|     | 130 |     |     |     | 135 |     |     |     |     |     | 140 |     |     |     |     |
| Glu | Glu | Glu | Ala | Arg | Thr | His | Thr | Glu | Ile | Glu | Met | Phe | Leu | Arg | Lys |
| 145 |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |     |
| Glu | Gln | Gln | Val | Gly | Pro | His | Ser | Phe | Ser | Met | Leu |     |     |     |     |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     |     |     |

<210> 2005  
 <211> 354  
 <212> DNA  
 <213> Homo sapiens

<400> 2005  
 gctagcacca agccaagggt atgtttcctt gcttgcattg ggggtttctg gccagtcagc  
 60  
 caagtgaact gattgacccc cagccctgtg gggaatttca ggggggtatt gtcttgggtca  
 120  
 tcggagtcag ggggtggcctt tnagccaagg ctgcattaac ttttgggaaa agaaatggga  
 180  
 agcccgccgt gtcacagggt ctctgaccg gctgggtagg gtttggcctt atcttacagc  
 240  
 cagtgtctgtg tttgtcaga tggacgcaca tggaaaccag gctaggatca tcttcccaat  
 300  
 gtctactccc tgctttggtc tgtcctgaaa acaattgcaa agacattgtg gctg  
 354

<210> 2006  
 <211> 111  
 <212> PRT  
 <213> Homo sapiens

<400> 2006  
 Met Phe Pro Cys Leu His Val Gly Phe Leu Ala Ser Gln Pro Ser Glu  
 1 5 10 15  
 Leu Ile Asp Pro Gln Pro Cys Gly Glu Phe Gln Gly Gly Ile Val Leu  
 20 25 30  
 Val Ile Gly Val Arg Gly Gly Leu Xaa Ala Lys Ala Ala Leu Thr Phe  
 35 40 45  
 Gly Lys Arg Asn Gly Lys Pro Ala Val Ser Gln Gly Leu Leu Thr Gly  
 50 55 60  
 Trp Val Gly Phe Gly Leu Ile Leu Gln Pro Val Leu Cys Leu Leu Arg  
 65 70 75 80  
 Trp Thr His Met Glu Thr Arg Leu Gly Ser Ser Ser Gln Cys Leu Leu  
 85 90 95  
 Pro Ala Leu Val Cys Pro Glu Asn Asn Cys Lys Asp Ile Val Ala  
 100 105 110

<210> 2007  
 <211> 335  
 <212> DNA  
 <213> Homo sapiens

<400> 2007  
 nnacgcgtgc catgtgcatg tgtatatgca tgtatgtgcg tatgtgtgtg catgtgtgtg  
 60  
 tgtatatgca tgtgtgtatg tgcattgtacg tgnngtgca tatgcgtgtg catgcatgag  
 120  
 tgtgcgtatg tgtgcatann catgtgcaca catgtacaca cgtgtacatg ttcattgcatg  
 180  
 tgcacgtgca tatgtgtaca cgtgtatgag tgtacatgta tgagcatatg tacacgtgtg  
 240

gatgtgtgtg tatgcatgtg tgtgtgcaca gatatgcctt ttcctttcat acaggctggt  
 300  
 ttgagtattg ctggtaggca gggacaactt tccgt  
 335

<210> 2008  
 <211> 111  
 <212> PRT  
 <213> Homo sapiens

<400> 2008  
 Xaa Arg Val Pro Cys Ala Cys Val Tyr Ala Cys Met Cys Val Cys Val  
 1 5 10 15  
 Cys Met Cys Val Cys Ile Cys Met Cys Val Cys Ala Cys Thr Cys Xaa  
 20 25 30  
 Cys Ile Cys Val Cys Met His Ala Cys Ala Tyr Val Cys Ile Xaa Met  
 35 40 45  
 Cys Thr His Val His Thr Cys Thr Cys Ser Cys Met Cys Thr Cys Ile  
 50 55 60  
 Cys Val His Val Tyr Ala Cys Thr Cys Met Ser Ile Cys Thr Arg Val  
 65 70 75 80  
 Asp Val Cys Val Cys Met Cys Val Cys Thr Asp Met Pro Phe Pro Phe  
 85 90 95  
 Ile Gln Ala Gly Leu Ser Ile Ala Gly Arg Gln Gly Gln Leu Ser  
 100 105 110

<210> 2009  
 <211> 288  
 <212> DNA  
 <213> Homo sapiens

<400> 2009  
 gacatcaccc cgctgctggc caaccccaac gggtttctccg cagcgatcga ggaactggtg  
 60  
 ctgcgttccc cagcgacat cgacgtgggc gtcggcatgg aggctcgcg cttcctcttc  
 120  
 gcagctccgg tcgccctggc catcggggca ggattcgtgc cggcgcgcaa gccggggaag  
 180  
 ctccccggcc aggtgtattc cgagaccttt gccatggagt acggggagga gaccctcacc  
 240  
 gtccaccagt acgccatcaa gccgggggtcg cgcgtcatca tcgtcgac  
 288

<210> 2010  
 <211> 96  
 <212> PRT  
 <213> Homo sapiens

<400> 2010  
 Asp Ile Thr Pro Leu Leu Ala Asn Pro Asn Gly Phe Ser Ala Ala Ile  
 1 5 10 15  
 Glu Glu Leu Val Leu Arg Ser Pro Arg Asp Ile Asp Val Val Val Gly  
 20 25 30  
 Met Glu Ala Arg Gly Phe Leu Phe Ala Ala Pro Val Ala Leu Ala Ile

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<210> 2011
<211> 384
<212> DNA
<213> Homo sapiens
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<210> 2012
<211> 123
<212> PRT
<213> Homo sapiens
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<210> 2013  
<211> 309

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2013

gcgtatcccc acggctacgg catgaccgcg cttatcggcc cggacctgtc caccgtcgaa  
60  
gccttgctcg cccagggtcca cagcacacaa accccgggtg acctggccaa tatcaatgcc  
120  
gataaccaga cggttatcgc gggcagcgac ggggcaatga aagcagtcgc caatctggtc  
180  
cgcggaacg gcgtcgccaa acgcttggcc gtcagcgtgc cgtcccattg tgcgctgctg  
240  
gaaaaacctg ccgaaacact ggcccaagcc ttcgctgaag tgacgctgaa aacgccgncn  
300  
nnncccn  
309

&lt;210&gt; 2014

&lt;211&gt; 103

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2014

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Tyr | Pro | His | Gly | Tyr | Gly | Met | Thr | Ala | Leu | Ile | Gly | Pro | Asp | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ser | Thr | Val | Glu | Ala | Leu | Leu | Ala | Gln | Val | His | Ser | Thr | Gln | Thr | Pro |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Val | Tyr | Leu | Ala | Asn | Ile | Asn | Ala | Asp | Asn | Gln | Thr | Val | Ile | Ala | Gly |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |
| Ser | Asp | Gly | Ala | Met | Lys | Ala | Val | Ala | Asn | Leu | Val | Arg | Gly | Asn | Gly |
|     | 50  |     |     |     | 55  |     |     |     |     |     | 60  |     |     |     |     |
| Val | Ala | Lys | Arg | Leu | Ala | Val | Ser | Val | Pro | Ser | His | Cys | Ala | Leu | Leu |
| 65  |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |     |
| Glu | Lys | Pro | Ala | Glu | Thr | Leu | Ala | Gln | Ala | Phe | Ala | Glu | Val | Thr | Leu |
|     |     |     |     | 85  |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Lys | Thr | Pro | Xaa | Xaa | Pro | Xaa |     |     |     |     |     |     |     |     |     |
|     |     |     |     | 100 |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 2015

&lt;211&gt; 329

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2015

acgcgtgccg tgctcgggtat ccgccgccac caccctgtct ttgggaccgg cgagttcacc  
60  
gatctaggcg ggccggacat ggcagtgatg tccttcctac gtcacaacga gcacgaaacg  
120  
gtcctgtgcc tggctaattct ctccgatact gagcggacgg ttgcccttca ccttccacaa  
180  
ttcgcggggcg tggcggggctc ttctctcatc catggtcagg acgcgcaacc agtaaaagct  
240  
gacggaacac tgtccgtacc gttgtggcca tatggctatc gatggctgca gatgtccggt  
300

gaggagaggt catgaccgct tgggaagac  
329

<210> 2016  
<211> 104  
<212> PRT  
<213> Homo sapiens

<400> 2016  
Thr Arg Ala Met Leu Gly Ile Arg Arg His His Pro Val Phe Gly Thr  
1 5 10 15  
Gly Glu Phe Thr Asp Leu Gly Gly Pro Asp Met Ala Val Met Ser Phe  
20 25 30  
Leu Arg His Asn Glu His Glu Thr Val Leu Cys Leu Ala Asn Leu Ser  
35 40 45  
Asp Thr Glu Arg Thr Val Ala Leu His Leu Pro Gln Phe Ala Gly Val  
50 55 60  
Ala Gly Ser Ser Leu Ile His Gly Gln Asp Ala Gln Pro Val Lys Ala  
65 70 75 80  
Asp Gly Thr Leu Ser Val Pro Leu Trp Pro Tyr Gly Tyr Arg Trp Leu  
85 90 95  
Gln Met Ser Gly Glu Glu Arg Ser  
100

<210> 2017  
<211> 457  
<212> DNA  
<213> Homo sapiens

<400> 2017  
accaaggtca gattcatggc ctcttttccct ccagcggcca gcaggaaacg cggggagccc  
60  
ttgatcatct ccgacatcaa gaaaggcagc gtggcacaca ggacgggcac cctggagcca  
120  
ggcgacaagc tactggccat tgacaatatc cgcctggaca actgccccat ggaggacgcc  
180  
gtgcaaatcc tgcggcagtg cgaggacctg gtgaagctga agatccggaa ggacgaggac  
240  
aactctgatg agctggagac cacaggtgcc gtcagttaca cagtggagct gaagcgctac  
300  
gggggtcccc tgggcatcac catttcgggc acggaggaac cttttgacct cattttcatc  
360  
tcaggcctcc ccaaactggg cctggctgag aggactggtg ccatccagtg ggggaaccgc  
420  
ttcgaccat aacaacttta ttctcagga cggacca  
457

<210> 2018  
<211> 143  
<212> PRT  
<213> Homo sapiens

<400> 2018  
Thr Lys Val Arg Phe Met Ala Ser Phe Pro Pro Ala Ala Ser Arg Lys



```

      1           5           10           15
Arg Gly Glu Pro Leu Ile Ile Ser Asp Ile Lys Lys Gly Ser Val Ala
      20           25           30
His Arg Thr Gly Thr Leu Glu Pro Gly Asp Lys Leu Leu Ala Ile Asp
      35           40           45
Asn Ile Arg Leu Asp Asn Cys Pro Met Glu Asp Ala Val Gln Ile Leu
      50           55           60
Arg Gln Cys Glu Asp Leu Val Lys Leu Lys Ile Arg Lys Asp Glu Asp
      65           70           75           80
Asn Ser Asp Glu Leu Glu Thr Thr Gly Ala Val Ser Tyr Thr Val Glu
      85           90           95
Leu Lys Arg Tyr Gly Gly Pro Leu Gly Ile Thr Ile Ser Gly Thr Glu
      100          105          110
Glu Pro Phe Asp Pro Ile Phe Ile Ser Gly Leu Pro Lys Arg Gly Leu
      115          120          125
Ala Glu Arg Thr Gly Ala Ile Gln Trp Gly Asn Arg Phe Gly Pro
      130          135          140

```

&lt;210&gt; 2019

&lt;211&gt; 483

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2019

```

cgcgtcggcg acgattttat cctcgggggtt cgttataccg cccgatgaatg tctcgagaac
60
ggcaccggca aggcggaagg catcgaaatc tccagacggc tgaaggagag cggcctgatc
120
gactatctca acgtcatcag gggacatatc gacaccgatc cggcctgac cgacgtcatc
180
cccattcagg gcatggcgag cgcgccgcat cttgatttcg caggcgaaat ccgcgcggcg
240
accagcttcc ccgtcttcca tgccgccaaa attcaggatg tcgccaccgc ccggcatgct
300
attgccgccc gcaaggtcga catgatcggc atgaccgcgc cccacatgac cgatccgcat
360
atcgctccga agatcatgga aaaacaggag gaggacatcc gcccctgcgt cggcgccaat
420
tattgtcttg atcgattta tcaaggcggc ctgccttct gcattcaca tgccggaacc
480
ggc
483

```

&lt;210&gt; 2020

&lt;211&gt; 161

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2020

```

Arg Val Gly Asp Asp Phe Ile Leu Gly Val Arg Tyr Thr Ala Asp Glu
      1           5           10           15
Cys Leu Glu Asn Gly Thr Gly Lys Ala Glu Gly Ile Glu Ile Ser Arg
      20           25           30
Arg Leu Lys Glu Ser Gly Leu Ile Asp Tyr Leu Asn Val Ile Arg Gly

```

<210> 2022

<211> 135  
 <212> PRT  
 <213> Homo sapiens

<400> 2022

```

Met Asp Thr Arg Ser Gly Ser Gln Cys Ser Val Thr Pro Glu Ala Ile
 1           5           10           15
Leu Asn Asn Glu Lys Leu Val Leu Pro Pro Arg Ile Ser Arg Val Asn
           20           25           30
Gly Trp Ser Leu Pro Leu His Tyr Phe Gln Val Val Thr Trp Ala Val
 35           40           45
Phe Val Gly Leu Ser Ser Ala Thr Phe Gly Ile Phe Ile Pro Phe Leu
 50           55           60
Pro His Ala Trp Lys Tyr Ile Ala Tyr Val Val Ser Phe Ser Ser Trp
 65           70           75           80
His Gly Leu Ser Gly Arg Gly Ser Trp Arg Thr Leu Arg Trp Thr Trp
           85           90           95
Leu Trp Gly Leu Gly His Gly Cys Pro Val Ala Pro Val Thr Cys Pro
           100          105          110
Gly Pro Asp Tyr Val Pro Arg Ala Cys Arg Trp Ala Gln Trp Pro Leu
           115          120          125
Met Val Leu Ala Ser Pro Gly
 130           135

```

<210> 2023  
 <211> 462  
 <212> DNA  
 <213> Homo sapiens

<400> 2023

```

naatctccga cgatccctgc cgacgtgctc gccggtgctc tcaagcaggc taaggaggct
60
cgcaccgcga tccttgaggt gatgaacgag gccatcgatt ctcccgatga aatggccccg
120
actgctccgc gcatcattac cgtccacatc ccagtggaca agatcgggtga ggtcatcggc
180
cccaagggca agatgattaa ccagattcag gacgacactg gcgccaatat ctctattgag
240
gacgatggca cgattttcat cggggctgat aacggagatt cggccgagtc tgcccgttcg
300
atgatcaacg cgatcgctaa cccacagatg cccgaggtcg gtgagcgtaa cctcggcacc
360
gtcgtcaaga cgacgagctt tggcgctttc gtctctctgc tgcccggcaa ggatgggtctg
420
ttgcacatct ccaagatgcg tgaccttaac gacggtaaac gc
462

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<210> 2024  
 <211> 154  
 <212> PRT  
 <213> Homo sapiens

<400> 2024

```

Xaa Ser Pro Thr Ile Pro Ala Asp Val Leu Ala Gly Ala Leu Lys Gln

```

```

      1           5           10           15
Ala Lys Glu Ala Arg Thr Ala Ile Leu Glu Val Met Asn Glu Ala Ile
      20           25           30
Asp Ser Pro Asp Glu Met Ala Pro Thr Ala Pro Arg Ile Ile Thr Val
      35           40           45
His Ile Pro Val Asp Lys Ile Gly Glu Val Ile Gly Pro Lys Gly Lys
      50           55           60
Met Ile Asn Gln Ile Gln Asp Asp Thr Gly Ala Asn Ile Ser Ile Glu
      65           70           75           80
Asp Asp Gly Thr Ile Phe Ile Gly Ala Asp Asn Gly Asp Ser Ala Glu
      85           90           95
Ser Ala Arg Ser Met Ile Asn Ala Ile Ala Asn Pro Gln Met Pro Glu
      100          105          110
Val Gly Glu Arg Tyr Leu Gly Thr Val Val Lys Thr Thr Ser Phe Gly
      115          120          125
Ala Phe Val Ser Leu Leu Pro Gly Lys Asp Gly Leu Leu His Ile Ser
      130          135          140
Lys Met Arg Asp Leu Asn Asp Gly Lys Arg
      145          150

```

&lt;210&gt; 2025

&lt;211&gt; 872

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2025

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cgtggtaacg atttacagga aagaacagct ggaactcgtg ctgggataac caggtacaag
60
tgctctctgc agagaataag tgcacacagg ttggtgtctt ctgaccgaga gccctcctga
120
aggagggtct gtacctctc cctcatctca ttttacacaa ggcgacaggt cagaggccag
180
ggtgggacga gagcgagga gcaactgtctc tggcagcagc acttgccact ccacaatgtg
240
gagaccagaa cggcacccca gagagcacgg gggaaatggc tcatctttaa aacaatggca
300
gaagaaatcc agccaaggct acttttcctg tgtgagcatg tttaaggcca gagagtggct
360
acttctctgc ctccctgcagc tccctcagtg tggcttggag gagttggcga agcttcacga
420
acacgctgga ggctgctctc cgggtgttcc cactggggac cccagggctt gcacattcct
480
gcaccgcctc ctgtaactgc agctgaagct ggaaagagac cgcagagctc ttgagaggcg
540
cggaatacca atggcgaaat attttgtcac agatgacctg caggttgttg ttacgcgct
600
gcgctccgca ttgttgact cgtaaatac atcttgaaaa acagtcaaag aaattgcagt
660
cttcatctcc tgtgcagttt tgctcaagga tttccctcat tttaggttca aaaaaggcca
720
tgtccacatc aatagccacc actgtgaagt cgctccggat ggcaaagttt tccggcttga
780
tgtcgagag gtggaggcgg tgggtacagt cctgtcgaa atggttcccc atgtccaaga
840

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agctgagtgc gaggcccctg atggccctgg cc  
872

<210> 2026  
<211> 157  
<212> PRT  
<213> Homo sapiens

<400> 2026  
Met Gly Asn His Phe Asp Arg Asp Cys Thr His Arg Leu His Leu Cys  
1 5 10 15  
Asp Ile Lys Pro Glu Asn Phe Ala Ile Arg Ser Asp Phe Thr Val Val  
20 25 30  
Ala Ile Asp Val Asp Met Ala Phe Phe Glu Pro Lys Met Arg Glu Ile  
35 40 45  
Leu Glu Gln Asn Cys Thr Gly Asp Glu Asp Cys Asn Phe Phe Asp Cys  
50 55 60  
Phe Ser Arg Cys Asp Leu Arg Val Asn Lys Cys Gly Ala Gln Arg Val  
65 70 75 80  
Asn Asn Asn Leu Gln Val Ile Cys Asp Lys Ile Phe Arg His Trp Phe  
85 90 95  
Ser Ala Pro Leu Lys Ser Ser Ala Val Ser Phe Gln Leu Gln Leu Gln  
100 105 110  
Leu Gln Glu Ala Val Gln Glu Cys Ala Asp Pro Gly Val Pro Ser Gly  
115 120 125  
Asn Thr Arg Arg Ala Ala Ser Ser Val Phe Trp Lys Leu Arg Gln Leu  
130 135 140  
Leu Gln Ala Thr Leu Arg Glu Leu Gln Glu Ala Glu Lys  
145 150 155

<210> 2027  
<211> 721  
<212> DNA  
<213> Homo sapiens

<400> 2027  
tgtacaatga cagaccaagt ataaggcttt ggttgagaga ccagctttta aatattgaaa  
60  
gacaaatata gtgtaaaagg cgcaatggaa tttgtatagt gaaggagatt ctctagtccc  
120  
agggttgtaa tgtcacttct gtctaattca ttacagaatt acagaatcaa atcatgttag  
180  
ccctagaaga aactgcagat ctttttgttc aatcttctca ttatatagga aaggaaattt  
240  
gagggccagt gcaatggttt gccaaaggta cacaactagt tagtgggaagg atccaggcat  
300  
tctaattcct ttctttcact aatacatttg gactgctcta cagaattact tctgtctgat  
360  
actatccact ttgaagagta gctagcatat agtagccatt tacttttggc tcaattaaaa  
420  
gcaaacattt ttgggacaaa atcaggcttt cctgattact tcttagataa cagagcccac  
480  
acagtattaa aacatgcagc ctttctttat gcaaaaagat tgaatatgga gccacttgaa  
540

tcttaaactt cagtctgcag ctataaccaa tatcatcaga agttatacac aattggcaaa  
 600  
 agaatagctt attctgcca aatactgtc cagtcactag gatcatttca cttttttgaa  
 660  
 taccatttgc tttggggagg gaagtattgc cagaccgtga attcattatt acctctgatc  
 720  
 a  
 721

<210> 2028

<211> 114

<212> PRT

<213> Homo sapiens

<400> 2028

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Asn | Ser | Arg | Ser | Gly | Asn | Thr | Ser | Leu | Pro | Lys | Ala | Asn | Gly | Ile |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     | 15  |     |     |
| Gln | Lys | Ser | Glu | Met | Ile | Leu | Val | Thr | Gly | Gln | Val | Phe | Gly | Gln | Asn |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Lys | Leu | Phe | Cys | Gln | Leu | Cys | Ile | Thr | Ser | Asp | Asp | Ile | Gly | Tyr |     |
|     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Ser | Cys | Arg | Leu | Lys | Phe | Lys | Ile | Gln | Val | Ala | Pro | Tyr | Ser | Ile | Phe |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Leu | His | Lys | Glu | Arg | Leu | His | Val | Leu | Ile | Leu | Cys | Gly | Leu | Cys | Tyr |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Leu | Arg | Ser | Asn | Gln | Glu | Ser | Leu | Ile | Leu | Ser | Gln | Lys | Cys | Leu | Leu |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Leu | Ile | Glu | Pro | Lys | Val | Asn | Gly | Tyr | Tyr | Met | Leu | Ala | Thr | Leu | Gln |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     |     | 110 |     |
| Ser | Gly |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

<210> 2029

<211> 8028

<212> DNA

<213> Homo sapiens

<400> 2029

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Thr Pro Arg Pro Leu Val Ala Arg Ala Ser Ile Ser Pro Gly Gly Ala
      35                40                45
Arg Ala Phe Pro Leu Pro Pro Asn Arg Gly Ala Glu Arg Arg Glu Gln
      50                55                60
Arg Arg Gly Leu Cys Gly Pro Gly Gly Ser Glu Cys Val Ser Gly Ala
      65                70                75                80
Gly Ala Gly Asp Gly Arg Gly Pro Trp Val Ser Leu Thr Val Leu Val
      85                90                95
His Glu

```

<210> 2039  
 <211> 307  
 <212> DNA  
 <213> Homo sapiens

```

<400> 2039
accggtgatc cactctgcga aagcgccgc gagcgaagcg ttcttggctc tcttcgagat
60
cgcgatgtat tgcccgaaa acagcggtt gatgccgtca ttgagaggct ctgggccaac
120
accggtacgg gcatatgcct gggcggcatt cttttggatg ttgcgaagaa aggacgcatt
180
cggcgtgccg aaagccaggg atccttcacc gtagaccttg gaccgatgga ggcccccggc
240
aatcgagtcc ttcgaaattc ccccttgcca tacatgtcgg ccatcgctcg cagccagagt
300
aacgcgt
307

```

<210> 2040  
 <211> 94  
 <212> PRT  
 <213> Homo sapiens

```

<400> 2040
Met Ala Asp Met Tyr Ala Lys Gly Glu Phe Arg Arg Thr Arg Leu Pro
1      5      10      15
Gly Ala Ser Ile Gly Pro Arg Ser Thr Val Lys Asp Pro Trp Leu Ser
      20      25      30
Ala Arg Arg Met Arg Pro Phe Phe Ala Thr Ser Lys Arg Met Pro Pro
      35      40      45
Arg His Met Pro Val Pro Val Leu Ala Gln Ser Leu Ser Met Thr Ala
      50      55      60
Ser Ser Arg Cys Phe Pro Gly Asn Thr Ser Arg Ser Arg Arg Arg Pro
      65      70      75      80
Arg Thr Leu Arg Ser Arg Pro Leu Ser Gln Ser Gly Ser Pro
      85      90

```

<210> 2041  
 <211> 348  
 <212> DNA  
 <213> Homo sapiens

&lt;400&gt; 2041

nnccggcgat gcagggattc gcccgcgatg cgctcgaacc cggcgcgggg ggcgttcctc  
 60  
 gccagcttcc tgccgttcgc cagacgcata gccgaggcgg gggtagcgaa ttcgctcgcc  
 120  
 cagctggtcg ccaagctgac cctgcccggc atgcccagaca tctaccaggg ctgagagatg  
 180  
 tgggacctca gcctggtcga ccgggacaat cgccgccccg tcgactacga gacacgcgac  
 240  
 gcggccctgg ccggctgggt cgcgaccccc ccggaggaac gcgcgcgggc gctgcgaccc  
 300  
 ctgctgacgg attggcgag cggcgcggtc aagctggccg tgacgcgt  
 348

&lt;210&gt; 2042

&lt;211&gt; 116

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2042

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Arg | Arg | Cys | Arg | Asp | Ser | Pro | Ala | Met | Arg | Ser | Asn | Pro | Ala | Arg |
| 1   |     |     | 5   |     |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Gly | Ala | Phe | Leu | Ala | Ser | Phe | Leu | Pro | Phe | Ala | Arg | Arg | Ile | Ala | Glu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ala | Gly | Val | Arg | Asn | Ser | Leu | Ala | Gln | Leu | Val | Ala | Lys | Leu | Thr | Leu |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Pro | Gly | Met | Pro | Asp | Ile | Tyr | Gln | Gly | Cys | Glu | Met | Trp | Asp | Leu | Ser |
|     | 50  |     |     |     | 55  |     |     |     |     |     | 60  |     |     |     |     |
| Leu | Val | Asp | Arg | Asp | Asn | Arg | Arg | Pro | Val | Asp | Tyr | Glu | Thr | Arg | Asp |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Ala | Ala | Leu | Ala | Gly | Trp | Val | Ala | Thr | Pro | Pro | Glu | Glu | Arg | Ala | Ala |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Ala | Leu | Arg | Thr | Leu | Leu | Thr | Asp | Trp | Arg | Ser | Gly | Ala | Val | Lys | Leu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     |     | 110 |     |
| Ala | Val | Thr | Arg |     |     |     |     |     |     |     |     |     |     |     |     |
|     |     |     | 115 |     |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 2043

&lt;211&gt; 712

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2043

gatctgacgg tctcgactaa gcctgaccat tccgagggtca ccgacgccga ccttgccgtc  
 60  
 gaagattcgg tgccgagagc cctgtctcga atgcgctccc gggatgccgt ccacggcgag  
 120  
 gaacgtgccg ataccgggga tggacccccg cggatggatca ttgatccgat cgacggcact  
 180  
 gcgaattttc tgctgtgggt ccagtggtgg gccaccctca ttgccctcag cgctgaggac  
 240  
 cagattgtcg catctgtggt ctctgtctct gccctcaagc gacgtgggtg ggcagcccg  
 300

ggctcaggag catggtcggg caaatccctg gcctcagcga caccgatcca cgtctcgaat  
 360  
 gtgcgcaatc ttgccgacgc attcttgtcc tactcttcgc tgcacggatg ggtcgagagc  
 420  
 ggacgagggc acgggttcgg tgaactcatg cggtcggtgt ggccgaccgg agccttcggc  
 480  
 gatttctggt cttacatgat ggtggcagaa ggtgtcgtcg atgtggcatg cgagccggaa  
 540  
 ctcagcctgc acgacatggc cgccctcgac gctatcgtca ccgaggcggg cggtaagtgc  
 600  
 accggtctcg atggcaaaga cggcccgtgg tctgggaatg ctctggcgtc gaatgggttc  
 660  
 cttcatgacc aggccttagc catggtccag cctcaggagt gagcaccgat cg  
 712

&lt;210&gt; 2044

&lt;211&gt; 233

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2044

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Leu | Thr | Val | Ser | Thr | Lys | Pro | Asp | His | Ser | Glu | Val | Thr | Asp | Ala |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Asp | Leu | Ala | Val | Glu | Asp | Ser | Val | Arg | Arg | Ala | Leu | Ser | Arg | Met | Arg |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ser | Arg | Asp | Ala | Val | His | Gly | Glu | Glu | Arg | Ala | Asp | Thr | Gly | Asp | Gly |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Pro | Arg | Arg | Trp | Ile | Ile | Asp | Pro | Ile | Asp | Gly | Thr | Ala | Asn | Phe | Leu |
| 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |
| Arg | Gly | Val | Pro | Val | Trp | Ala | Thr | Leu | Ile | Ala | Leu | Ser | Val | Glu | Asp |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Gln | Ile | Val | Ala | Ser | Val | Val | Ser | Ala | Pro | Ala | Leu | Lys | Arg | Arg | Trp |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Trp | Ala | Ala | Arg | Gly | Ser | Gly | Ala | Trp | Ser | Gly | Lys | Ser | Leu | Ala | Ser |
|     |     |     | 100 |     |     |     | 105 |     |     |     |     |     | 110 |     |     |
| Ala | Thr | Pro | Ile | His | Val | Ser | Asn | Val | Arg | Asn | Leu | Ala | Asp | Ala | Phe |
|     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |     |
| Leu | Ser | Tyr | Ser | Ser | Leu | His | Gly | Trp | Val | Glu | Ser | Gly | Arg | Gly | His |
| 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |     |
| Gly | Phe | Gly | Glu | Leu | Met | Arg | Ser | Val | Trp | Arg | Thr | Arg | Ala | Phe | Gly |
| 145 |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |     |
| Asp | Phe | Trp | Ser | Tyr | Met | Met | Val | Ala | Glu | Gly | Val | Val | Asp | Val | Ala |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Cys | Glu | Pro | Glu | Leu | Ser | Leu | His | Asp | Met | Ala | Ala | Leu | Asp | Ala | Ile |
|     |     | 180 |     |     |     | 185 |     |     |     |     |     | 190 |     |     |     |
| Val | Thr | Glu | Ala | Gly | Gly | Lys | Phe | Thr | Gly | Leu | Asp | Gly | Lys | Asp | Gly |
|     | 195 |     |     |     |     | 200 |     |     |     |     |     | 205 |     |     |     |
| Pro | Trp | Ser | Gly | Asn | Ala | Leu | Ala | Ser | Asn | Gly | Phe | Leu | His | Asp | Gln |
| 210 |     |     |     | 215 |     |     |     |     |     | 220 |     |     |     |     |     |
| Ala | Leu | Ala | Met | Val | Gln | Pro | Gln | Glu |     |     |     |     |     |     |     |
| 225 |     |     |     | 230 |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 2045

&lt;211&gt; 406

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2045

nnttgacac cggcgactat gccgccaccg cacggatcaa tcgcggaacc agggcagggg  
 60  
 atgcgccgga tgggcgacgg tgatggaccg ggcgctggac ctgggcggtc gcttcgacga  
 120  
 cantacaggc tttggccgag gcgggttgga agaaaccggt caaccggtgg tttggccccg  
 180  
 catcaatgcc cagaaccaga agccttgccg attcgtccca ggccgttcaa ggccgatggc  
 240  
 gagatcgctc cgatgactgg cgacggtgtc aacgacgccc cctcgctcaa ggcggcccat  
 300  
 atcgggtgtc ccatggacaa acgcggcacc gacgtcgcgc gcgaggcttc cgccatggtc  
 360  
 ctgctcgagg atgattttgg atcgatcgtg cagtcggtcc ggctcg  
 406

&lt;210&gt; 2046

&lt;211&gt; 135

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2046

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Trp | Thr | Pro | Ala | Thr | Met | Pro | Pro | Pro | His | Gly | Ser | Ile | Ala | Asp |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Pro | Gly | Gln | Gly | Met | Arg | Arg | Met | Gly | Asp | Gly | Asp | Gly | Pro | Gly | Ala |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gly | Pro | Gly | Arg | Ser | Leu | Arg | Arg | Xaa | Tyr | Arg | Leu | Trp | Pro | Arg | Arg |
|     | 35  |     |     |     |     |     | 40  |     |     |     | 45  |     |     |     |     |
| Val | Gly | Arg | Asn | Arg | Ser | Thr | Gly | Gly | Leu | Ala | Pro | His | Gln | Cys | Pro |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Glu | Pro | Glu | Ala | Leu | Arg | Ile | Arg | Pro | Arg | Pro | Phe | Lys | Ala | Asp | Gly |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Glu | Ile | Val | Ala | Met | Thr | Gly | Asp | Gly | Val | Asn | Asp | Ala | Pro | Ser | Leu |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Lys | Ala | Ala | His | Ile | Gly | Val | Ala | Met | Asp | Lys | Arg | Gly | Thr | Asp | Val |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Ala | Arg | Glu | Ala | Ser | Ala | Met | Val | Leu | Leu | Glu | Asp | Asp | Phe | Gly | Ser |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Ile | Val | Gln | Ser | Val | Arg | Leu |     |     |     |     |     |     |     |     |     |
|     | 130 |     |     |     |     | 135 |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 2047

&lt;211&gt; 796

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2047

aagcttttga acgagacccc tgagctctgg gttcagcccc gaggaagccc agcaacagga  
 60  
 tgaggaattt gagaagaaga ttccaagtgt ggaagacagc cttggagagg gcagcagggg  
 120

tgctggccgg ccaggagaga gaggatccgg gggcttgttc agtcctagca ctgcccacgt  
 180  
 gccggatggg gcactcgggc agagagacca gacgagctgg caaaacagtg atgctagcca  
 240  
 ggaggtggga gggcatcagg agagacagca ggcaggggct cagggccctg gcagtgtgga  
 300  
 cctggaagat ggggagatgg gaaagcgagg ctgggtcggg gagtttagcc tcagtgttgg  
 360  
 cccccagcga gaggcagcat ttagcccagg gcagcaggac tggagccggg acttctgcat  
 420  
 cgaggccagt gagaggagct atcagtttgg catcattggc aacgacagag tgagtgggtg  
 480  
 tggttttagc ctttctagca agatggaagg tggtcacttt gtgcctcctg ggaagaccac  
 540  
 agctggctcg gtggactgga ctgaccagct gggcttcagg aacttggaag tgtccagctg  
 600  
 tgtgggttct gggggctcga gcgaggccag ggagagtgcc gtgggacaga tgggctggtc  
 660  
 aggtggcctg agcttgagag acatgaacct gaccggctgt ttggaaagtg gagggctctga  
 720  
 agagccgggg ggaatcggaa ttggggagaa ggactggact tctgatgtta atgtgaagag  
 780  
 caaagatttg gctgag  
 796

&lt;210&gt; 2048

&lt;211&gt; 160

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2048

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gly | Lys | Arg | Gly | Trp | Val | Gly | Glu | Phe | Ser | Leu | Ser | Val | Gly | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Gln | Arg | Glu | Ala | Ala | Phe | Ser | Pro | Gly | Gln | Gln | Asp | Trp | Ser | Arg | Asp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Phe | Cys | Ile | Glu | Ala | Ser | Glu | Arg | Ser | Tyr | Gln | Phe | Gly | Ile | Ile | Gly |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Asn | Asp | Arg | Val | Ser | Gly | Ala | Gly | Phe | Ser | Pro | Ser | Ser | Lys | Met | Glu |
|     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |
| Gly | Gly | His | Phe | Val | Pro | Pro | Gly | Lys | Thr | Thr | Ala | Gly | Ser | Val | Asp |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Trp | Thr | Asp | Gln | Leu | Gly | Leu | Arg | Asn | Leu | Glu | Val | Ser | Ser | Cys | Val |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Gly | Ser | Gly | Gly | Ser | Ser | Glu | Ala | Arg | Glu | Ser | Ala | Val | Gly | Gln | Met |
|     |     | 100 |     |     |     | 105 |     |     |     |     |     |     | 110 |     |     |
| Gly | Trp | Ser | Gly | Gly | Leu | Ser | Leu | Arg | Asp | Met | Asn | Leu | Thr | Gly | Cys |
|     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |     |
| Leu | Glu | Ser | Gly | Gly | Ser | Glu | Glu | Pro | Gly | Gly | Ile | Gly | Ile | Gly | Glu |
|     | 130 |     |     |     | 135 |     |     |     |     |     | 140 |     |     |     |     |
| Lys | Asp | Trp | Thr | Ser | Asp | Val | Asn | Val | Lys | Ser | Lys | Asp | Leu | Ala | Glu |
| 145 |     |     |     |     | 150 |     |     |     | 155 |     |     |     |     |     | 160 |

&lt;210&gt; 2049

&lt;211&gt; 516

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2049

cgcgctcgctt acggtgcgct gaataccagc ctgctggcgc tggcggtcag cttcgcgctcg  
 60  
 ctgttcctcg ggatagtgtt cgggctgatg ccacgtctga tgtgcgggggt gattgaactg  
 120  
 gccaacgctc ccccgccaat cgccctgggc ctgttagtag tcgccattag cggcccttca  
 180  
 gcctacggtg ccgcctgtgc ggtgatgttg gtcagtggg ctccgctggc cgccattgt  
 240  
 gttcgttgt tggcggaagc ccgcacgcag ccctatatcc gcatgttgcc ggtattgggc  
 300  
 gtcggccgat ggcgcacgt gacccactac ctgctgccgg cgctctctgc tcccctgctg  
 360  
 cgccacgcca tgttgctct gccgggcatt gcgctggcgc tggcggcctt gggttttttt  
 420  
 ggtcttgggc cgagccacc cagtgcagaa tgggggctgg tgctggcgga aggcattgcct  
 480  
 tatctcgaaac gggcgccctg gggagtcctg gcaccg  
 516

&lt;210&gt; 2050

&lt;211&gt; 172

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2050

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Val | Ala | Tyr | Gly | Ala | Leu | Asn | Thr | Ser | Leu | Leu | Ala | Leu | Ala | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ser | Phe | Ala | Ser | Leu | Phe | Leu | Gly | Ile | Val | Phe | Gly | Leu | Met | Pro | Arg |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Leu | Met | Cys | Gly | Val | Ile | Glu | Leu | Ala | Asn | Ala | Pro | Pro | Pro | Ile | Ala |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Leu | Gly | Leu | Leu | Val | Val | Ala | Ile | Ser | Gly | Pro | Ser | Ala | Tyr | Gly | Ala |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Ala | Cys | Ala | Val | Met | Leu | Val | Ser | Trp | Ala | Pro | Leu | Ala | Ala | His | Cys |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Ala | Ser | Leu | Leu | Ala | Glu | Ala | Arg | Thr | Gln | Pro | Tyr | Ile | Arg | Met | Leu |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Pro | Val | Leu | Gly | Val | Gly | Arg | Trp | Arg | Thr | Leu | Thr | His | Tyr | Leu | Leu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Pro | Ala | Leu | Ser | Ala | Pro | Leu | Leu | Arg | His | Ala | Met | Leu | Arg | Leu | Pro |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Gly | Ile | Ala | Leu | Ala | Leu | Ala | Ala | Leu | Gly | Phe | Phe | Gly | Leu | Gly | Pro |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Gln | Pro | Pro | Ser | Ala | Glu | Trp | Gly | Leu | Val | Leu | Ala | Glu | Gly | Met | Pro |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Tyr | Leu | Glu | Arg | Ala | Pro | Trp | Gly | Val | Leu | Ala | Pro |     |     |     |     |
|     |     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     |     |

&lt;210&gt; 2051

&lt;211&gt; 411

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2051

gagcaaaact atcggttctac cggcaatatt ctgaaaagt ccaaccaact tatttcgaat  
 60  
 aatagtgatc gtctcggtaa gaatttatgg accgacggtg aaatggggga gccagtaggt  
 120  
 atttatgcag catttaatga attagatgag gcaaaatttg tggcgtctca aatccaaaat  
 180  
 tgggtagatg atgggtgggga attagatgat tgtgctgttt tatatcgtag taatagccaa  
 240  
 tctcgtgtta ttgaagaagc cttgattcgt tgccaaattc cttatcgaat ttatggcggg  
 300  
 atgcgattct tcgaacgcca agaaattaaa gatgcgttgg catatttacg ttttaattaat  
 360  
 aatcgtcaag atgatgccgc atttgagcgt gtgattaata cgctacgcg t  
 411

&lt;210&gt; 2052

&lt;211&gt; 137

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2052

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Gln | Asn | Tyr | Arg | Ser | Thr | Gly | Asn | Ile | Leu | Lys | Ser | Ala | Asn | Gln |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Leu | Ile | Ser | Asn | Asn | Ser | Asp | Arg | Leu | Gly | Lys | Asn | Leu | Trp | Thr | Asp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gly | Glu | Met | Gly | Glu | Pro | Val | Gly | Ile | Tyr | Ala | Ala | Phe | Asn | Glu | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Asp | Glu | Ala | Lys | Phe | Val | Ala | Ser | Gln | Ile | Gln | Asn | Trp | Val | Asp | Asp |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Gly | Gly | Glu | Leu | Asp | Asp | Cys | Ala | Val | Leu | Tyr | Arg | Ser | Asn | Ser | Gln |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Ser | Arg | Val | Ile | Glu | Glu | Ala | Leu | Ile | Arg | Cys | Gln | Ile | Pro | Tyr | Arg |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Ile | Tyr | Gly | Gly | Met | Arg | Phe | Phe | Glu | Arg | Gln | Glu | Ile | Lys | Asp | Ala |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Leu | Ala | Tyr | Leu | Arg | Leu | Ile | Asn | Asn | Arg | Gln | Asp | Asp | Ala | Ala | Phe |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Glu | Arg | Val | Ile | Asn | Thr | Pro | Thr | Arg |     |     |     |     |     |     |     |
|     |     | 130 |     |     |     |     | 135 |     |     |     |     |     |     |     |     |

&lt;210&gt; 2053

&lt;211&gt; 287

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2053

nccatggaag ccttcaatct tgtaagagaa agtgaacagc tgttttccat atgccaaatc  
 60  
 ccgctcctct gctggatcct gtgtaccagt ctgaagcaag agatgcagaa aggaaaagac  
 120

ctggccctga cctgccagag cactacctct gtgtactcct ctttcgtctt taacctgttc  
 180  
 acacctgagg gtgccgaggg cccgactccg caaaccagc accagctgaa ggccctgtgc  
 240  
 tccctggctg cagaggggtat gtggacagac acatttgagt tttgtga  
 287

<210> 2054  
 <211> 79  
 <212> PRT  
 <213> Homo sapiens

<400> 2054  
 Ile Cys Gln Ile Pro Leu Leu Cys Trp Ile Leu Cys Thr Ser Leu Lys  
 1 5 10 15  
 Gln Glu Met Gln Lys Gly Lys Asp Leu Ala Leu Thr Cys Gln Ser Thr  
 20 25 30  
 Thr Ser Val Tyr Ser Ser Phe Val Phe Asn Leu Phe Thr Pro Glu Gly  
 35 40 45  
 Ala Glu Gly Pro Thr Pro Gln Thr Gln His Gln Leu Lys Ala Leu Cys  
 50 55 60  
 Ser Leu Ala Ala Glu Gly Met Trp Thr Asp Thr Phe Glu Phe Cys  
 65 70 75

<210> 2055  
 <211> 298  
 <212> DNA  
 <213> Homo sapiens

<400> 2055  
 nnacgcgttg ttatgaacaa tgacggtgtc ctctaccccg atacctgcgt ggggtactgat  
 60  
 tcccacacca ccatggaaaa tgggtcttggc attctgggct ggggcgtcgg tgggtattgaa  
 120  
 gccgaggctg ctatgcttgg ccagcccatc tccatgctta tccccgtgt tgttggtctt  
 180  
 aaacttactg gccaaacaca gccgggtgtc accgctacag atgttggtct taccattact  
 240  
 gatatgcttc gccagcatgg tgtgggtgga aaattcgggg aattctatgg gggaagcg  
 298

<210> 2056  
 <211> 99  
 <212> PRT  
 <213> Homo sapiens

<400> 2056  
 Xaa Arg Val Val Met Asn Asn Asp Gly Val Leu Tyr Pro Asp Thr Cys  
 1 5 10 15  
 Val Gly Thr Asp Ser His Thr Thr Met Glu Asn Gly Leu Gly Ile Leu  
 20 25 30  
 Gly Trp Gly Val Gly Gly Ile Glu Ala Glu Ala Ala Met Leu Gly Gln  
 35 40 45  
 Pro Ile Ser Met Leu Ile Pro Arg Val Val Gly Phe Lys Leu Thr Gly



50                      55                      60  
 Gln Thr Gln Pro Gly Val Thr Ala Thr Asp Val Val Leu Thr Ile Thr  
 65                      70                      75                      80  
 Asp Met Leu Arg Gln His Gly Val Gly Gly Lys Phe Gly Glu Phe Tyr  
                     85                      90                      95  
 Gly Gly Ser

<210> 2057  
 <211> 569  
 <212> DNA  
 <213> Homo sapiens

<400> 2057  
 acgcgctcccg acagtaccga ctataacgga ggaaactatc aggaacggta taaaatttta  
 60  
 gcagaaattc gtaaggctct tgaagacgga gatcgccaaa aagccaaacg attagctgaa  
 120  
 caaaatctag ttggaccaa caacgccag tatggtcgtt atctagcctt tggatgatc  
 180  
 ttcattgtct tcaataacca gaaaaagggg ctggatacag ttacagacta tcaccgtggt  
 240  
 ttggatatca cagaagccac tactacaact tcttacaccc aagatggaac gacctttaa  
 300  
 agagaaacct tctcaagtta ccctgatgat gttactgtta ctcaattgac caaaaaggg  
 360  
 gacaaaaaac ttgattttac agtttgaat agcttaacag aagatttact tgctaacgga  
 420  
 gactactcag cggaatattc taactacaag agtggccatg ttacgacaga cccaaatggt  
 480  
 atcctactaa aaggtagct caagataat ggcctccagt tcgcatccta tctaggaatt  
 540  
 aaaacggacg gaaaagtac tgttcatga  
 569

<210> 2058  
 <211> 128  
 <212> PRT  
 <213> Homo sapiens

<400> 2058  
 Met Val Phe Asn Asn Gln Lys Lys Gly Leu Asp Thr Val Thr Asp Tyr  
 1                      5                      10                      15  
 His Arg Gly Leu Asp Ile Thr Glu Ala Thr Thr Thr Thr Ser Tyr Thr  
                     20                      25                      30  
 Gln Asp Gly Thr Thr Phe Lys Arg Glu Thr Phe Ser Ser Tyr Pro Asp  
                     35                      40                      45  
 Asp Val Thr Val Thr His Leu Thr Gln Lys Gly Asp Lys Lys Leu Asp  
                     50                      55                      60  
 Phe Thr Val Trp Asn Ser Leu Thr Glu Asp Leu Leu Ala Asn Gly Asp  
 65                      70                      75                      80  
 Tyr Ser Ala Glu Tyr Ser Asn Tyr Lys Ser Gly His Val Thr Thr Asp  
                     85                      90                      95  
 Pro Asn Gly Ile Leu Leu Lys Gly Thr Val Lys Asp Asn Gly Leu Gln

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     | 100 |     | 105 |     | 110 |     |     |     |     |     |     |     |     |     |     |
| Phe | Ala | Ser | Tyr | Leu | Gly | Ile | Lys | Thr | Asp | Gly | Lys | Val | Thr | Val | His |
|     | 115 |     |     |     | 120 |     |     |     |     |     |     | 125 |     |     |     |

<210> 2059  
 <211> 644  
 <212> DNA  
 <213> Homo sapiens

<400> 2059  
 gaattcgtgc caccgtgcc atacttcgcc acgcaacaga gtgccgtcag cggattgggc  
 60  
 agcaatcgac ctgtaggact cagccatgat cgactgggca tcctcgtata gtcgcatgc  
 120  
 cgcaaccgcc tgcgcttcca agcctgcagc gacgtaagag gccctctcac aactgaacc  
 180  
 gatcgctcca gacaacgtgg aagcgataac ctgcgctcgc ttctgctgat tctgggcca  
 240  
 gctcgacaag aagaaccgca gggggcgac ggcttgtca gggagcgac cttcagcgtt  
 300  
 cgtcttggtc tccgggacag caaaaagcgg ggaatcagcc aggccacgct ccgtcatgag  
 360  
 tcggccgagg tccgccggtta cctctctcat ggcttcaca ggaacgcgtt cacacaccac  
 420  
 cgcatcgac gcgtgcctct cttgagcctc gttgaggaaa tcccacggca cagcgtcagc  
 480  
 gtagcgggct gctgaggtga caaagatcca cagatccgag gcctggagca actgagccgc  
 540  
 cagatcacga ttgcggttca ccacagagtc gatgtccggg gcacgagga tggccaaacc  
 600  
 tcgcggaatc cttgactccg cgacgagctg caaactcgac gcgt  
 644

<210> 2060  
 <211> 130  
 <212> PRT  
 <213> Homo sapiens

<400> 2060  
 Met Arg Glu Val Pro Ala Asp Leu Gly Arg Leu Met Thr Glu Arg Gly  
 1 5 10 15  
 Leu Ala Asp Ser Pro Leu Phe Ala Val Pro Glu Thr Lys Thr Asn Ala  
 20 25 30  
 Glu Gly Ala Leu Pro Asp Gln Ala Val Ala Pro Leu Arg Phe Phe Leu  
 35 40 45  
 Ser Ser Leu Ala Gln Asn Gln Gln Lys Arg Arg Glu Val Ile Ala Ser  
 50 55 60  
 Thr Leu Ser Gly Ala Ile Gly Ser Val Cys Glu Arg Ala Ser Tyr Val  
 65 70 75 80  
 Ala Ala Gly Leu Glu Ala Gln Ala Val Ala Ser Arg Leu Tyr Glu  
 85 90 95  
 Asp Ala Gln Ser Ile Met Ala Glu Ser Tyr Arg Ser Ile Ala Ala Gln  
 100 105 110  
 Ser Ala Asp Gly Thr Leu Leu Arg Gly Glu Val Leu Ala Arg Trp His

115 120 125

Glu Phe  
130

<210> 2061  
<211> 481  
<212> DNA  
<213> Homo sapiens

<400> 2061  
gttaacctgg taaggagagc gacacaggaa ggtgcagggg ttgcatggt gtggccccag  
60  
atgctgtgat tacgcgccag ccccgtcaca ccgtacgggt ggtaggactg ggcaaagaag  
120  
acgccgccac ctggatgcac tgaggtgtgc acagccacgt ggagatgatg ctgggggctc  
180  
acggtgactc tcaggaggcc ctggcctggc ctatctggag ccttctctgt gaaatgaggc  
240  
tggtaacgcc cactagcagg gttgtagggg acatggatct gtggccacct cctcaagggt  
300  
tgccacacgc accaggtcct gactgggagt ccggcccccga gggcctgtgg atggctggcc  
360  
tgggccccagc ctccgcccc aagggtgtgtg gcacctggca tgtgcccagc agttgggggc  
420  
ggctgggtggg aagggtgtgtg tcaggtggcg gagcctcggg gccaggatct cactcacgcg  
480  
t  
481

<210> 2062  
<211> 133  
<212> PRT  
<213> Homo sapiens

<400> 2062  
Met Pro Gly Ala Ser Thr Leu Gly Gly Gly Gly Trp Ala Gln Ala Ser  
1 5 10 15  
His Pro Gln Ala Leu Gly Ala Gly Leu Pro Val Arg Thr Trp Cys Val  
20 25 30  
Trp Gln Pro Leu Arg Arg Trp Pro Gln Ile His Val Pro Tyr Asn Pro  
35 40 45  
Ala Ser Gly Arg Tyr Gln Pro His Phe Thr Glu Lys Ala Pro Asp Arg  
50 55 60  
Pro Gly Gln Gly Leu Leu Arg Val Thr Val Ser Pro Gln His His Leu  
65 70 75 80  
His Val Ala Val His Thr Ser Val His Pro Gly Gly Gly Val Phe Phe  
85 90 95  
Ala Gln Ser Tyr His Pro Tyr Gly Val Thr Gly Leu Ala Arg Asn His  
100 105 110  
Ser Ile Trp Gly His Thr Met Ala Thr Pro Ala Pro Ser Cys Val Ala  
115 120 125  
Leu Leu Thr Arg Leu  
130

<210> 2063  
 <211> 419  
 <212> DNA  
 <213> Homo sapiens

<400> 2063  
 gccggcgccg tcgagcgcggt gcctttcaat atcgaggccc aagacatggt gctgctcatc  
 60  
 gcggacacca atgccccgca catgctttcc gacggccaat acgcctcccg ccggggcatc  
 120  
 atcgagcgccg tccaatctgc cgccggttgc tccatccgcg agatctcgaa tgcggtggac  
 180  
 tttgccgcca ccgtcaatcc cgccgaggcg gaactctatc gccgccgctg gcaccacgtg  
 240  
 gtggaagaaa ccaaccggac cctagatgcc gctaccgcg tggcatcttc cgatctagat  
 300  
 acattccggc ggcttatgcg cgagagccac atctccctgc gcgaccttta tgaggtcacc  
 360  
 actccggagc tcgactccgt ttttaccgcg gccggcgagc tgggcgctcg catgannnn  
 419

<210> 2064  
 <211> 139  
 <212> PRT  
 <213> Homo sapiens

<400> 2064  
 Ala Gly Ala Val Glu Arg Val Pro Phe Asn Ile Glu Ala Gln Asp Met  
 1 5 10 15  
 Val Leu Leu Ile Ala Asp Thr Asn Ala Pro His Met Leu Ser Asp Gly  
 20 25 30  
 Gln Tyr Ala Ser Arg Arg Gly Ile Ile Asp Ala Val Gln Ser Ala Ala  
 35 40 45  
 Gly Cys Ser Ile Arg Glu Ile Ser Asn Ala Val Asp Phe Ala Ala Thr  
 50 55 60  
 Val Asn Pro Ala Glu Ala Glu Leu Tyr Arg Arg Arg Val His His Val  
 65 70 75 80  
 Val Glu Glu Thr Asn Arg Thr Leu Asp Ala Ala Thr Ala Leu Ala Ser  
 85 90 95  
 Ser Asp Leu Asp Thr Phe Arg Arg Leu Met Arg Glu Ser His Ile Ser  
 100 105 110  
 Leu Arg Asp Leu Tyr Glu Val Thr Thr Pro Glu Leu Asp Ser Val Phe  
 115 120 125  
 Thr Ala Ala Gly Glu Leu Gly Ala Arg Met Xaa  
 130 135

<210> 2065  
 <211> 598  
 <212> DNA  
 <213> Homo sapiens

<400> 2065  
 gccggcgcta tggcctctct gctcgccgac gccgcgatg cccttcccg cgcaaagggtg  
 60

cgcgcgaccg ttactggatc ggcgggattg ggaaccgcag aggcattggg ccttactttc  
 120  
 attcaggagg tcatagctga gacggccgcc gtccaacgtt ggaatcccga cgccgacgtg  
 180  
 cttctcgaac tcggtggtga ggatgccaaag atcacctacc ttaagccggt ccccgaacag  
 240  
 cgcatgaatg gttcgtgtgc tgggtggcacc ggtgccttca tcgaccagat ggctaccctg  
 300  
 ctgcacaccg acactcccgg cctcaatgac ctgcacatccc gagccaagac catccatccc  
 360  
 atgcgctcgc gctgtggtgt ttttgccaag tccgaccttc agccctcat taacgagggg  
 420  
 gcccgccacg aggatctggc tgcctcggtc ctgcaggctg tcgccactca gtgcattgcc  
 480  
 ggcctggcat gtggtcgccc gattcgaggt aaggatcatct tccttggcgg tccgcttcac  
 540  
 tttatgccaa gtttgcgaga cgctttctcg cgcgtcctcg acggttaagg tgacgcgt  
 598

&lt;210&gt; 2066

&lt;211&gt; 199

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2066

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Ala | Met | Ala | Ser | Leu | Leu | Ala | Asp | Ala | Ala | Asp | Ala | Leu | Pro |
| 1   |     |     | 5   |     |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Gly | Ala | Lys | Val | Arg | Ala | Thr | Val | Thr | Gly | Ser | Ala | Gly | Leu | Gly | Thr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ala | Glu | Ala | Leu | Gly | Leu | Thr | Phe | Ile | Gln | Glu | Val | Ile | Ala | Glu | Thr |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ala | Ala | Val | Gln | Arg | Trp | Asn | Pro | Asp | Ala | Asp | Val | Leu | Leu | Glu | Leu |
|     |     |     | 50  |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Gly | Gly | Glu | Asp | Ala | Lys | Ile | Thr | Tyr | Leu | Lys | Pro | Val | Pro | Glu | Gln |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Arg | Met | Asn | Gly | Ser | Cys | Ala | Gly | Gly | Thr | Gly | Ala | Phe | Ile | Asp | Gln |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Met | Ala | Thr | Leu | Leu | His | Thr | Asp | Thr | Pro | Gly | Leu | Asn | Asp | Leu | Ala |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Ser | Arg | Ala | Lys | Thr | Ile | His | Pro | Ile | Ala | Ser | Arg | Cys | Gly | Val | Phe |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Ala | Lys | Ser | Asp | Leu | Gln | Pro | Leu | Ile | Asn | Glu | Gly | Ala | Arg | His | Glu |
|     |     |     | 130 |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Asp | Leu | Ala | Ala | Ser | Val | Leu | Gln | Ala | Val | Ala | Thr | Gln | Cys | Ile | Ala |
| 145 |     |     |     |     | 150 |     |     |     | 155 |     |     |     |     | 160 |     |
| Gly | Leu | Ala | Cys | Gly | Arg | Pro | Ile | Arg | Gly | Lys | Val | Ile | Phe | Leu | Gly |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Gly | Pro | Leu | His | Phe | Met | Pro | Ser | Leu | Arg | Asp | Ala | Phe | Ser | Arg | Val |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Leu | Asp | Gly | Lys | Val | Asp | Ala |     |     |     |     |     |     |     |     |     |
|     |     |     | 195 |     |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 2067

&lt;211&gt; 366

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2067

ttccagcaga tgctgcaaac ctggacccgc agcggcacgc tgcaggaggc cgtggccaac  
 60  
 aagatcgccg aatggctgga tgccgacctg caacagtggg acatttcccg cgatgcaccg  
 120  
 tacttcgggt tcgagatccc gggcgagcca ggcaagtatt tctacgtgtg gctggacgcg  
 180  
 ccgatcggct acatggccag tttcaagaac ctgtgcgacc gcacgccgga gctggacttc  
 240  
 gatgctttct gggccaagga ctccaccgcc gagctgtacc atttcatcgg caaggacatc  
 300  
 gtcaacttcc acgccctgtt ctggccggcg atgctcgaag gctcggggcta ccgtaaaccg  
 360  
 accggt  
 366

&lt;210&gt; 2068

&lt;211&gt; 122

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2068

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Gln | Gln | Met | Leu | Gln | Thr | Trp | Thr | Arg | Ser | Gly | Thr | Leu | Gln | Glu |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Ala | Val | Ala | Asn | Lys | Ile | Ala | Glu | Trp | Leu | Asp | Ala | Asp | Leu | Gln | Gln |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Trp | Asp | Ile | Ser | Arg | Asp | Ala | Pro | Tyr | Phe | Gly | Phe | Glu | Ile | Pro | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Glu | Pro | Gly | Lys | Tyr | Phe | Tyr | Val | Trp | Leu | Asp | Ala | Pro | Ile | Gly | Tyr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Met | Ala | Ser | Phe | Lys | Asn | Leu | Cys | Asp | Arg | Thr | Pro | Glu | Leu | Asp | Phe |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |
| Asp | Ala | Phe | Trp | Ala | Lys | Asp | Ser | Thr | Ala | Glu | Leu | Tyr | His | Phe | Ile |
|     |     |     |     | 85  |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Gly | Lys | Asp | Ile | Val | Asn | Phe | His | Ala | Leu | Phe | Trp | Pro | Ala | Met | Leu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Glu | Gly | Ser | Gly | Tyr | Arg | Lys | Pro | Thr | Gly |     |     |     |     |     |     |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     |     |     |     |     |

&lt;210&gt; 2069

&lt;211&gt; 280

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2069

cctagagagg atggtggaga ctgtgctgtg gcagggtgtt ccggaacctt ccctgggatg  
 60  
 catggggcct cgccgcaggc catctctcca gacctgggct caccctgccc ctgtgctgtg  
 120  
 gcctttggct ggaattccac ccagccttc ttgcctcaag aacgcccttc ccccttcaga  
 180

tctcatgggc acaggccccg tcttcctaaa cggggtcaga gccccagta atcatgacaa  
 240  
 agaccctctc ctgatcaag ctttggtcaa gctectaccc  
 280

<210> 2070  
 <211> 90  
 <212> PRT  
 <213> Homo sapiens

<400> 2070  
 Met Val Glu Thr Val Arg Val Gln Gly Val Pro Glu Pro Ser Leu Gly  
 1 5 10 15  
 Cys Met Gly Pro Arg Arg Arg Pro Ser Leu Gln Thr Trp Ala His Pro  
 20 25 30  
 Ala Pro Val Leu Leu Pro Leu Ala Gly Ile Pro Pro Gln Pro Ser Cys  
 35 40 45  
 Leu Lys Asn Ala Leu Pro Pro Ser Asp Leu Met Gly Thr Gly Pro Val  
 50 55 60  
 Phe Leu Asn Gly Val Arg Ala Pro Ser Asn His Asp Lys Asp Pro Leu  
 65 70 75 80  
 Leu Asp Gln Ala Leu Val Lys Leu Leu Pro  
 85 90

<210> 2071  
 <211> 399  
 <212> DNA  
 <213> Homo sapiens

<400> 2071  
 acgcgtgtcc agcagactta gaaagcaggt tcctcttgtc atacagcacg ttaacatagc  
 60  
 tgacgaggcc tgggtgtctt catcagtact gtgatgactc tttcaccttt gacttcagat  
 120  
 gctggcgctt tttacttttt gtgccaaact ctacacatga aacacttttg gaataactac  
 180  
 agacatgact ttctttatct ggggaaaagg agggcattaa accagattag gggctgggag  
 240  
 gggaggttgt caggggatga gctgctcctg aggaagaggc agagatcaag cttcactcag  
 300  
 cagctggatt ctcacctagt ttatagactg aaatcctgca aggtgggttac aacagtgaac  
 360  
 aatatgttca tacataaaga ctctaccctc aggtgatca  
 399

<210> 2072  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 2072  
 Met Thr Leu Ser Pro Leu Thr Ser Asp Ala Gly Ala Phe Tyr Phe Leu  
 1 5 10 15  
 Cys Gln Thr Leu His Met Lys His Phe Trp Asn Asn Tyr Arg His Asp

```

                20                25                30
Phe Leu Tyr Leu Gly Lys Arg Arg Ala Leu Asn Gln Ile Arg Gly Trp
                35                40                45
Glu Gly Arg Leu Ser Gly Asp Glu Leu Leu Leu Arg Lys Arg Gln Arg
                50                55                60
Ser Ser Phe Thr Gln Gln Leu Asp Ser His Leu Val Tyr Arg Leu Lys
65                70                75                80
Ser Cys Lys Val Val Thr Thr Val Asn Asn Met Phe Ile His Lys Asp
                85                90                95
Ser Thr Leu Arg
                100

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<210> 2073  
 <211> 339  
 <212> DNA  
 <213> Homo sapiens

```

<400> 2073
ggatccactt ctgtgccttt ccagcttcta gaggtgcct gcgttccttg gctcgtggcc
60
ccttctcca ccttcaagcc agcagcggag gcctgagtc ttctcatgcc atctctctgt
120
tctctctcct gcctctcct ccacactgaa ggaccctgt gatcacactg gccccccac
180
cggatgaccc aggataatcc atctcctgt ttgaaggctg gctgattagc aaccttcatt
240
ccatctgcct ccttcattcc ccctggccat gtaatgggat tcacagcttc tggggattag
300
gacatggaca tcttgtggcg ggggcataat tctgtcgac
339

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<210> 2074  
 <211> 85  
 <212> PRT  
 <213> Homo sapiens

```

<400> 2074
Met Lys Glu Ala Asp Gly Met Lys Val Ala Asn Gln Pro Thr Phe Lys
1      5      10      15
Gln Gly Asp Gly Leu Ser Trp Val Ile Arg Trp Gly Gly Gln Cys Asp
20     25     30
His Arg Gly Pro Ser Val Trp Arg Arg Arg Gln Glu Arg Glu Gln Arg
35     40     45
Asp Gly Met Arg Arg Thr Gln Ala Ser Ala Ala Gly Leu Lys Val Glu
50     55     60
Glu Gly Ala Thr Ser Gln Gly Thr Gln Ala Ala Ser Arg Ser Trp Lys
65     70     75     80
Gly Thr Glu Val Asp
85

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<210> 2075  
 <211> 481  
 <212> DNA  
 <213> Homo sapiens



&lt;400&gt; 2075

ntggccaggt tgacctcaaa ggtgtacatt gttttatgtg gcgacaatgg actgtcagaa  
 60  
 accaaggagc tctcctgtcc agagaagtcc ctgtttgaaa ggaattccag acacaccttt  
 120  
 atcctgagcg ctctgcccc actgggcctg ctgaggaaga tccgcctctg gcacgacagc  
 180  
 cgtgggcctt ccccaggctg gttcatcagc cacgtgatgg tgaaggagct gcacacggga  
 240  
 cagggtctggt tcttccctgc ccagtgtgg ctgtctgccg gcaggcatga tggctcgtg  
 300  
 gagcgggagc tcacctgtct gcaaggggga ctgcgcttct ggaagctttt ctattgcaag  
 360  
 ttcacagagt acctggagga tttccatgtc tggctgtcgg tgtacagcag gccctcctcc  
 420  
 agccgctacc tgcacacgcc gcgccccacc gtgtccttct cctgtgtgtg cgtctacgcg  
 480  
 t  
 481

&lt;210&gt; 2076

&lt;211&gt; 160

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2076

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Ala | Arg | Leu | Thr | Ser | Lys | Val | Tyr | Ile | Val | Leu | Cys | Gly | Asp | Asn |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Gly | Leu | Ser | Glu | Thr | Lys | Glu | Leu | Ser | Cys | Pro | Glu | Lys | Ser | Leu | Phe |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Glu | Arg | Asn | Ser | Arg | His | Thr | Phe | Ile | Leu | Ser | Ala | Pro | Ala | Gln | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Gly | Leu | Leu | Arg | Lys | Ile | Arg | Leu | Trp | His | Asp | Ser | Arg | Gly | Pro | Ser |
|     |     | 50  |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Pro | Gly | Trp | Phe | Ile | Ser | His | Val | Met | Val | Lys | Glu | Leu | His | Thr | Gly |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Gln | Gly | Trp | Phe | Phe | Pro | Ala | Gln | Cys | Trp | Leu | Ser | Ala | Gly | Arg | His |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Asp | Gly | Arg | Val | Glu | Arg | Glu | Leu | Thr | Cys | Leu | Gln | Gly | Gly | Leu | Gly |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Phe | Trp | Lys | Leu | Phe | Tyr | Cys | Lys | Phe | Thr | Glu | Tyr | Leu | Glu | Asp | Phe |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| His | Val | Trp | Leu | Ser | Val | Tyr | Ser | Arg | Pro | Ser | Ser | Ser | Arg | Tyr | Leu |
|     |     | 130 |     |     |     | 135 |     |     |     | 140 |     |     |     |     |     |
| His | Thr | Pro | Arg | Pro | Thr | Val | Ser | Phe | Ser | Leu | Leu | Cys | Val | Tyr | Ala |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |

&lt;210&gt; 2077

&lt;211&gt; 1410

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2077

ncagagtgtt ttgagctatc tggatatccca aatgatgtga atactttcag aaaccaatgg  
60  
caaattgaac ccaactgttt gcgaattcgg cacgagtaaa gatctttttt ttttttttgt  
120  
tttttttttt tttttttttt ttttgctttc taaagtggct ttaatatac acaagcggct  
180  
ctttgggtcta cagtggagaga aaacagaggg agccaggaaa ggctccccgc tggcctctgg  
240  
agtccaggag ccttaggaag gctgaaacaa gccctgacca gcaggcttag ttgtcctgag  
300  
aagagccagt gaggccacct ggtccagttc accaggtttc ccagggaagc acaggcatct  
360  
ctgggtcccc gagcacagtg ccagggaaga ccccccaat ccccatctga acaggccgag  
420  
ggcagcatgg gaaaggctca gactgcaggt tcatcccgca ggatggtaag gacacgtgct  
480  
cctccctcgc aagagcaggc ttgtgcacag cccggcacag ggccagccag ggcggccct  
540  
gcggctgtgc agcgcttacc agggggagga gttcagccat caggacctt tccaagtgga  
600  
tctgtggctc cagcacagcc actcgcagct tgagggccgc cagggtctgc agctcctggg  
660  
tgctggagta gacaagcagc tgggnnggct ccatgcaggc tccgctctac cccacagga  
720  
cggcgaggct ccggggggcc tnnccccaca gacatggtct tggaggctgt tccgccaccg  
780  
ctgcacgcag ctctgcagc ctgtgcagac actggcccac catggcctgc agcccctcca  
840  
gcgtgagcag gcagcggtac tctgcattcc agtccatggg ggctgctgag agctcctccc  
900  
tcatgcgcag tctcagcagc gagcaggcct tccgcaggcg ccccgctcc gcctccacct  
960  
ccacagcact gagcctgggc tggggccccgc ctgaagctgt ctgcatgttc tggaggaact  
1020  
gggttttggc agcggcgga tccgtggaat cactggctctg tgtggaactg agctggggcc  
1080  
acaggctcga gttctgggaa gctgctttcc tgaatgccgc aggcagccgc agcagggtgc  
1140  
ccttctcctt gagtgtgaag gcttctgggg cctgaggagc agcggatggg gccatttgct  
1200  
ggtcctctgag gcccgcccca ggctggggg ttegggctcc catcccaaca cgggtcccat  
1260  
ccccactga cagcagccgg cgctcagggt ggcccttggc aggcaccgtg gtctggcgga  
1320  
ggcccttggg gggctctctg tctgaagcat ggccaccagc ttggcctggg gaatgcgggt  
1380  
gggcggaggc tgctctgcca gaagaggtga  
1410

&lt;210&gt; 2078

&lt;211&gt; 106

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2078

Gly His Leu Val Gln Phe Thr Arg Phe Pro Arg Glu Ala Gln Ala Ser  
 1 5 10 15  
 Leu Gly Pro Arg Ala Gln Cys Gln Gly Arg His Pro Gln Ser Pro Ser  
 20 25 30  
 Glu Gln Ala Glu Gly Ser Met Gly Lys Ala Gln Thr Ala Gly Ser Ser  
 35 40 45  
 Arg Arg Met Val Arg Thr Arg Ala Pro Pro Ser Gln Glu Gln Ala Cys  
 50 55 60  
 Ala Gln Pro Gly Thr Gly Pro Ala Arg Ala Ala Pro Ala Ala Val Gln  
 65 70 75 80  
 Arg Leu Pro Gly Gly Gly Val Gln Pro Ser Gly Pro Phe Pro Ser Gly  
 85 90 95  
 Ser Ala Gly Pro Ala Gln Pro Leu Ala Ala  
 100 105

&lt;210&gt; 2079

&lt;211&gt; 565

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2079

atttacctcg caaccgaccc tgatcgtgaa ggtgaaagca tcagctggca catccagcag  
 60  
 gtactggcgg tcaaataccta caaacgcatt accttcaacg agatcactct caagcgcgtt  
 120  
 gaagaggcac tggccaatcc tcgacaaatc gatctgaaca gagttgcctc acaggaatgc  
 180  
 cggcgtgtgc ttgaccgctt ggtgggggtac ctggtgaccc aagagttgcg ggcctgatg  
 240  
 ggcaaaccta cttccgctgg ccgcgttcaa tcacccgccg tgtttcttgt ggtcttgccg  
 300  
 gaacgcgaga tccgcaactt tcaggtgatc aatcactttg gcgtgcgtct gttctttgcc  
 360  
 gatgtaagtc ggggcaccac ttggtatgcc gagtggcaac cggtaccgga tttcgcaagc  
 420  
 aagcatttcc cctatgttca ggatagcaac ctggctcagc acgtcgccgg cactcgaaat  
 480  
 gtggtcgtgg agtcctgcga ggatcgcaag gccgagcgtc atcctcctgc accattcatc  
 540  
 tcatccactc ttcaacaggc cgcca  
 565

&lt;210&gt; 2080

&lt;211&gt; 188

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2080

Ile Tyr Leu Ala Thr Asp Pro Asp Arg Glu Gly Glu Ser Ile Ser Trp  
 1 5 10 15  
 His Ile Gln Gln Val Leu Ala Val Lys Ser Tyr Lys Arg Ile Thr Phe  
 20 25 30  
 Asn Glu Ile Thr Leu Lys Arg Val Glu Glu Ala Leu Ala Asn Pro Arg

```

          35          40          45
Gln Ile Asp Leu Asn Arg Val Ala Ser Gln Glu Cys Arg Arg Val Leu
  50          55          60
Asp Arg Leu Val Gly Tyr Leu Val Thr Gln Glu Leu Arg Arg Leu Met
  65          70          75          80
Gly Lys Pro Thr Ser Ala Gly Arg Val Gln Ser Pro Ala Val Phe Leu
          85          90          95
Val Val Leu Arg Glu Arg Glu Ile Arg Asn Phe Gln Val Ile Asn His
          100          105          110
Phe Gly Val Arg Leu Phe Phe Ala Asp Val Ser Arg Gly Thr Thr Trp
          115          120          125
Tyr Ala Glu Trp Gln Pro Val Pro Asp Phe Ala Ser Lys His Phe Pro
          130          135          140
Tyr Val Gln Asp Ser Asn Leu Ala Gln His Val Ala Gly Thr Arg Asn
          145          150          155          160
Val Val Val Glu Ser Cys Glu Asp Arg Lys Ala Glu Arg His Pro Pro
          165          170          175
Ala Pro Phe Ile Ser Ser Thr Leu Gln Ala Ala
          180          185

```

<210> 2081  
 <211> 319  
 <212> DNA  
 <213> Homo sapiens

```

<400> 2081
aagcttatgg aaaaacgggg atacggagag gagtatataa atcgctataa aatgatgaca
60
aggttccatc atcaacgggt tccactagta attttggtgt gtggaactgc ctgtactgga
120
aaatcaacaa tcgctacaca acttgctcag aggctcaatt tgcctaattgt tttgcagacg
180
gacatgggtgt atgagctgct gcggacatca acagatgcgc cacttacttc agttcctgtg
240
tgggctcgcg attttaattc acctgaagag cttatcactg aattctgcag agaatgcaga
300
gttgtagcga agggtttgg
319

```

<210> 2082  
 <211> 106  
 <212> PRT  
 <213> Homo sapiens

```

<400> 2082
Lys Leu Met Glu Lys Arg Gly Tyr Gly Glu Glu Tyr Ile Asn Arg Tyr
  1          5          10          15
Lys Met Met Thr Arg Phe His His Gln Arg Val Pro Leu Val Ile Leu
          20          25          30
Val Cys Gly Thr Ala Cys Thr Gly Lys Ser Thr Ile Ala Thr Gln Leu
          35          40          45
Ala Gln Arg Leu Asn Leu Pro Asn Val Leu Gln Thr Asp Met Val Tyr
          50          55          60
Glu Leu Leu Arg Thr Ser Thr Asp Ala Pro Leu Thr Ser Val Pro Val

```



&lt;400&gt; 2085

nnggatccca aagaccgcca tattgccatg gtgttccaaa actatgccct ctaccgcac  
 60  
 atgactgtcg ccgacaacat gggttttgcc ctcaaactgg cgaaagtgga taagaaagaa  
 120  
 atccggcgtc gcgtggagga agccgccgaa ctctcgacc tcaccgacta tctggaccgc  
 180  
 aaacccaagg cactctccgg tggccagcgg cagcgcgtcg ccatggggcg cgctattgtt  
 240  
 cgttcccccc gcgtcttctt gatggacgag cctctttcta acctggatgc gcgtctgcgt  
 300  
 gtcgcacccc gcgcccagat tgcggaactg cagcgccgcc tgggcaccac caccgtttat  
 360  
 gtcacccatg accaggtgga ggctatgacg atgggggatc gtgtggctgt tctctgtgcc  
 420  
 gggaaactgc agcaggtgga tactccacgt aatcttttcg accacccgcg taacgcgt  
 478

&lt;210&gt; 2086

&lt;211&gt; 159

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2086

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Asp | Pro | Lys | Asp | Arg | Asp | Ile | Ala | Met | Val | Phe | Gln | Asn | Tyr | Ala |
| 1   |     |     | 5   |     |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Leu | Tyr | Pro | His | Met | Thr | Val | Ala | Asp | Asn | Met | Gly | Phe | Ala | Leu | Lys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Leu | Ala | Lys | Val | Asp | Lys | Lys | Glu | Ile | Arg | Arg | Arg | Val | Glu | Glu | Ala |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ala | Glu | Leu | Leu | Asp | Leu | Thr | Asp | Tyr | Leu | Asp | Arg | Lys | Pro | Lys | Ala |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Leu | Ser | Gly | Gly | Gln | Arg | Gln | Arg | Val | Ala | Met | Gly | Arg | Ala | Ile | Val |
|     |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     | 80  |     |
| Arg | Ser | Pro | Arg | Val | Phe | Leu | Met | Asp | Glu | Pro | Leu | Ser | Asn | Leu | Asp |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Ala | Arg | Leu | Arg | Val | Arg | Thr | Arg | Ala | Gln | Ile | Ala | Glu | Leu | Gln | Arg |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Arg | Leu | Gly | Thr | Thr | Thr | Val | Tyr | Val | Thr | His | Asp | Gln | Val | Glu | Ala |
|     |     | 115 |     |     |     | 120 |     |     |     |     |     | 125 |     |     |     |
| Met | Thr | Met | Gly | Asp | Arg | Val | Ala | Val | Leu | Cys | Ala | Gly | Lys | Leu | Gln |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Gln | Val | Asp | Thr | Pro | Arg | Asn | Leu | Phe | Asp | His | Pro | Ala | Asn | Ala |     |
|     |     |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     |

&lt;210&gt; 2087

&lt;211&gt; 731

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2087

gataattctc tacacggcat gagctgggga cgtacccccc ttgccaacgt cacctcacgg  
 60

tcgtaccgtg gtgattagca gctagccgag gcgctagccg ccatataaga ttcccaaatt  
 120  
 aaaagaaaaa gcattgcgtc ggccaagaat tgctgtcgct gctgcaacgg ctactgcgct  
 180  
 ggtcggatca atcgcagcaa tcacccctc cccaggcag aagctaactc caataggcca  
 240  
 cgctcggtag ctcaagccgc tatcgccacg gatggaaagg ggataatcaa caaggactgc  
 300  
 cgtgatgcag tcatcaacga tgcaaagctg cgtgccgcga ttgccggtgc gttggttaag  
 360  
 gctggattta gttccgccga cgcggtggct ctagegccgc gtattgccag agaaatggca  
 420  
 aaagagggcg tcctcctcat caaccaccac aagctaaagg ctctcatcgg agcccagggtg  
 480  
 ggtctgctca ctgatgcgaa gatccagcgt gctgccgctg cagtggacct cggcatcaaa  
 540  
 gccactctag ctgcgacaat cattcccaac gcgctgcatt cagcggcatt caaggatgcg  
 600  
 gtgctcgcaa atcttgctgc cgccggtctg acaagaagt ggcaaaggct acggctgctg  
 660  
 ccattgccgc aactgcgctc aatcccgcgc tcgggccgat cgcaaagact gaggccatta  
 720  
 aggctgagat c  
 731

<210> 2088  
 <211> 105  
 <212> PRT  
 <213> Homo sapiens

<400> 2088  
 Met Ala Lys Glu Gly Val Leu Leu Ile Asn His His Lys Leu Lys Ala  
 1 5 10 15  
 Leu Ile Gly Ala Gln Val Gly Leu Leu Thr Asp Ala Lys Ile Gln Arg  
 20 25 30  
 Ala Ala Ala Ala Val Asp Leu Gly Ile Lys Ala Thr Leu Ala Ala Thr  
 35 40 45  
 Ile Ile Pro Asn Ala Leu His Ser Ala Ala Phe Lys Asp Ala Val Val  
 50 55 60  
 Ala Asn Leu Val Ala Ala Gly Leu Thr Arg Ser Trp Gln Arg Leu Arg  
 65 70 75 80  
 Leu Ser Pro Leu Pro Gln Leu Arg Ser Ile Pro Leu Ser Gly Arg Ser  
 85 90 95  
 Gln Arg Leu Arg Pro Leu Arg Leu Arg  
 100 105

<210> 2089  
 <211> 315  
 <212> DNA  
 <213> Homo sapiens

<400> 2089  
 accggtgtgg accaggtca gctgcgcgac gccatgtttt cctaccttcc ccaccacaag  
 60

ctcggggaat tcgacatcga tctgttgctg gaccatcgcg attcccgta gcccatcatc  
 120  
 ttcgacaccg accacttcga ggggtacgag cgcccccgcc tcgtgctgca cgaagtcacc  
 180  
 gatcaacttg gccaaagcgtt ccttgatttg gaaggccag agccggctct cggctgggaa  
 240  
 tcgttggtgg cgtctctcac gagtcttgct gactctatgg ggatccgtct gaccggcatt  
 300  
 accgattcga tcccg  
 315

<210> 2090  
 <211> 105  
 <212> PRT  
 <213> Homo sapiens

<400> 2090  
 Thr Gly Val Asp Gln Ala Gln Leu Arg Asp Ala Met Phe Ser Tyr Leu  
 1 5 10 15  
 Pro His His Lys Leu Gly Glu Phe Asp Ile Asp Leu Leu Leu Asp His  
 20 25 30  
 Arg Asp Ser Arg Gln Pro Ile Ile Phe Asp Thr Asp His Phe Glu Gly  
 35 40 45  
 Tyr Glu Arg Pro Arg Leu Val Leu His Glu Val Thr Asp Gln Leu Gly  
 50 55 60  
 Gln Ala Phe Leu Val Leu Glu Gly Pro Glu Pro Ala Leu Gly Trp Glu  
 65 70 75 80  
 Ser Leu Val Ala Ser Leu Thr Ser Leu Val Asp Ser Met Gly Ile Arg  
 85 90 95  
 Leu Thr Gly Ile Thr Asp Ser Ile Pro  
 100 105

<210> 2091  
 <211> 322  
 <212> DNA  
 <213> Homo sapiens

<400> 2091  
 actcttgtcc attgtctctg tctctgcgtt tttctctctg tctctctgtg tctctgtctc  
 60  
 tgtgtccctg tccagttctg tnnctgtgtg tgcgcgcac tctctctgtg tctctgttng  
 120  
 agtctctgtc tcttttgtct ctgtctctct ctgtgtctct gccattttg gtctctgctt  
 180  
 tcttttctct gtgtgtctct ccatttctgt ctctcttctt ctgtctctct ccatttctgt  
 240  
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 300  
 ccatttctgt cccttcacgc gt  
 322

<210> 2092  
 <211> 107  
 <212> PRT



&lt;213&gt; Homo sapiens

&lt;400&gt; 2092

```

Thr Leu Val His Cys Leu Cys Leu Cys Val Phe Leu Ser Val Ser Leu
 1             5             10             15
Cys Leu Cys Leu Cys Val Pro Val Gln Phe Cys Xaa Cys Val Cys Ala
             20             25             30
His Leu Ser Leu Cys Leu Cys Xaa Ser Leu Cys Leu Phe Cys Leu Cys
             35             40             45
Leu Ser Leu Cys Leu Cys Pro Phe Trp Ser Leu Leu Ser Phe Leu Cys
             50             55             60
Val Ser Leu His Phe Cys Leu Ser Ser Ser Val Ser Leu His Phe Cys
             65             70             75             80
Leu Cys Ser Phe Ser Leu Cys Val Ser Leu Leu Ser Leu Cys Phe Ser
             85             90             95
Ala Cys Leu Cys Pro Phe Leu Ser Leu His Ala
             100             105

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&lt;210&gt; 2093

&lt;211&gt; 324

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2093

```

gccggcggtca tgcaaacgat caaggtggcg caatttcgcc tctgccatag tcgaaaaatg
60
tttgtggtgg cctaccgcg agagaccag gagatggtgc tcgatgcgca taaccgcgcc
120
tttgcgttct ttggcggcgt accgcagcgg gttatctacg acaaccttaa aaccgcagtg
180
gatgcgatct tggtcggcaa ggatcgaatc ttcaaccggc gcttcctggc gttggctaata
240
cattacctgt ttgaacctgt agcctgtacg cctgctgctg gctgggagaa gggccaagtt
300
gagaatcaag ttcgcaacat acgc
324

```

&lt;210&gt; 2094

&lt;211&gt; 108

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2094

```

Ala Gly Val Met Gln Thr Ile Lys Val Ala Gln Phe Arg Leu Cys His
 1             5             10             15
Ser Arg Lys Met Phe Val Val Ala Tyr Pro Arg Glu Thr Gln Glu Met
             20             25             30
Val Leu Asp Ala His Asn Arg Ala Phe Ala Phe Phe Gly Gly Val Pro
             35             40             45
Gln Arg Val Ile Tyr Asp Asn Leu Lys Thr Ala Val Asp Ala Ile Leu
             50             55             60
Val Gly Lys Asp Arg Ile Phe Asn Arg Arg Phe Leu Ala Leu Ala Asn
             65             70             75             80
His Tyr Leu Phe Glu Pro Val Ala Cys Thr Pro Ala Ala Gly Trp Glu

```

85 90 95  
 Lys Gly Gln Val Glu Asn Gln Val Arg Asn Ile Arg  
 100 105  
 <210> 2095  
 <211> 402  
 <212> DNA  
 <213> Homo sapiens  
 <400> 2095  
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 60  
 accctgcccc ccgccgcaa tcttctgctt aaacaattcc atattgtgga tgttgcccgg  
 120  
 cgcgtggtgg gcgtgggttc agtgggcacc cactccctgg tactgctact gtccggcccc  
 180  
 aatgatgaac ctcttgctgt gcaagtgaag gaagccctcc ccagtgtcct caccacccat  
 240  
 gggaaactgc cggatgcttt ttcggaactg tccgctgggg actcctccgg gtcctcccc  
 300  
 gataatcttg ataagcatat taaagccggc aatggctacc gggtggtggc gtgccagcag  
 360  
 attctgcagg cccactcgga tccgctgctg ggggtggacgc gt  
 402

<210> 2096  
 <211> 134  
 <212> PRT  
 <213> Homo sapiens

<400> 2096  
 Pro Val Thr Asp Gln Glu Glu Ala Asp Asn Met Ile Ala Ser Phe Asp  
 1 5 10 15  
 Thr Tyr Val Arg Thr Leu Pro Pro Ala Ala Asn Leu Leu Leu Lys Gln  
 20 25 30  
 Phe His Ile Val Asp Val Ala Arg Arg Val Val Gly Val Gly Ser Val  
 35 40 45  
 Gly Thr His Ser Leu Val Leu Leu Leu Ser Gly Pro Asn Asp Glu Pro  
 50 55 60  
 Leu Val Leu Gln Val Lys Glu Ala Leu Pro Ser Val Leu Thr Thr His  
 65 70 75 80  
 Gly Lys Leu Pro Asp Ala Phe Ser Glu Leu Ser Ala Gly Asp Ser Ser  
 85 90 95  
 Gly Leu Leu Pro Asp Asn Leu Asp Lys His Ile Lys Ala Gly Asn Gly  
 100 105 110  
 Tyr Arg Val Val Ala Cys Gln Gln Ile Leu Gln Ala His Ser Asp Pro  
 115 120 125  
 Leu Leu Gly Trp Thr Arg  
 130

<210> 2097  
 <211> 641  
 <212> DNA  
 <213> Homo sapiens

&lt;400&gt; 2097

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&lt;210&gt; 2098

&lt;211&gt; 213

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2098

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Phe | Leu | Thr | Arg | Pro | Pro | Ala | Ser | Ser | Ala | Ala | Val | Gly | Ser | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Pro | Pro | Pro | Glu | Ala | Glu | Gln | Ala | Trp | Pro | Gln | Ser | Ser | Gly | Glu | Glu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Glu | Leu | Gln | Leu | Gln | Leu | Ala | Leu | Ala | Met | Ser | Lys | Glu | Glu | Ala | Asp |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Gln | Val | Leu | Gly | Val | Gln | Leu | Gly | Leu | Ser | Val | Arg | His | Pro | Pro | Pro |
|     |     | 50  |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Arg | Leu | Thr | Ser | Gly | Ser | Leu | Pro | Ala | Arg | Arg | Gly | Pro | Gly | Pro | His |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Cys | Arg | Cys | Ser | Thr | Cys | Cys | His | Ser | Ser | Pro | Pro | Gln | Ser | Cys | Leu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ile | Leu | Thr | Pro | Pro | Ser | Leu | Cys | Val | Ser | Leu | Ser | Ala | Cys | Pro | His |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Trp | Phe | Arg | Asp | Pro | Gln | Pro | Leu | Phe | Ile | Arg | Leu | Tyr | Leu | Thr | Leu |
|     |     | 115 |     |     |     | 120 |     |     |     |     |     | 125 |     |     |     |
| Ala | Leu | Pro | Leu | Thr | Leu | Pro | Leu | Ala | Pro | Pro | Val | Met | Pro | Leu | Thr |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Leu | Ser | Leu | Pro | Gln | Pro | Pro | Ser | Cys | Gly | Pro | Glu | Asp | Asp | Ala | Gln |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Leu | Gln | Leu | Ala | Leu | Ser | Leu | Ser | Arg | Glu | Glu | His | Asp | Lys | Val | Arg |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Ala | Ala | Ser | Leu | Ser | Leu | Pro | Leu | Pro | Gly | Ala | Pro | Leu | Arg | Pro | Ala |

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Pro Thr Gly Ser Arg
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 <212> DNA  
 <213> Homo sapiens

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240
cagtattctg ttcaggtgag ctcagaggtg gcaggtgcct ggctgcggcc ctgcctcact
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 <213> Homo sapiens

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35     40     45
Pro Arg Val Cys Pro Gln Thr Ser Leu Pro Arg His Leu Leu His Asp
50     55     60
Pro Gly Gly Gly Arg Gln Trp Gln Tyr Ser Val Gln Val Ser Ser Glu
65     70     75     80
Val Ala Gly Ala Trp Leu Arg Pro Cys Leu Thr Pro Thr Ala Ser Ala
85     90     95
Ser Ser Pro Leu Ala His Pro Thr Trp Pro
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<210> 2101  
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 Asp Gln Tyr Val Ala Arg Cys Asp Thr Ile Gly Thr Pro Val Arg Leu  
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 Thr Phe Asp Pro Glu Ile Val Gly Gly Gly Glu Gly Ala Ile Glu Gly  
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 50 55 60  
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 85 90 95  
 Ala Gly Val Met Ala Cys Asp Asp Leu Asp Glu Val Leu Arg Leu Ser  
 100 105 110  
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<211> 240

<212> PRT

<213> Homo sapiens

<400> 2106

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| Ser | Asn | Gln | Ser | Val | Phe | Leu | Leu | Phe | Ser | Asp | Leu | Leu | Pro | Gln | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Glu | Ala | Pro | Ser | Ser | Leu | Thr | Pro | Ser | Ser | Glu | Leu | Ser | Ser | Pro | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gln | Ser | Glu | Leu | Thr | Asn | Met | Asp | Leu | Ala | Ala | Leu | Phe | Ser | Asp | Thr |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Pro | Ala | Asn | Ala | Ser | Gly | Ser | Ala | Gly | Gly | Ser | Asp | Glu | Ala | Leu | Asn |
|     |     |     | 50  |     |     |     | 55  |     |     |     | 60  |     |     |     |     |
| Ser | Gly | Ile | Leu | Thr | Ile | Asp | Val | Thr | Ser | Val | Ser | Ser | Ser | Leu | Gly |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Gly | Asn | Leu | Pro | Ala | Asn | Asn | Ser | Ser | Leu | Gly | Pro | Met | Glu | Pro | Leu |
|     |     |     |     |     | 85  |     |     |     | 90  |     |     |     |     | 95  |     |
| Val | Leu | Val | Ala | His | Ser | Asp | Ile | Pro | Pro | Ser | Leu | Asp | Ser | Pro | Leu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     |     | 110 |     |
| Val | Leu | Gly | Thr | Ala | Ala | Thr | Val | Leu | Gln | Gln | Gly | Ser | Phe | Ser | Val |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Asp | Asp | Val | Gln | Thr | Val | Ser | Ala | Gly | Ala | Leu | Gly | Cys | Leu | Val | Ala |
|     |     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |
| Leu | Pro | Met | Lys | Asn | Leu | Ser | Asp | Asp | Pro | Leu | Ala | Leu | Thr | Ser | Asn |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Ser | Asn | Leu | Ala | Ala | His | Ile | Thr | Thr | Pro | Thr | Ser | Ser | Ser | Thr | Pro |
|     |     |     |     |     | 165 |     |     |     | 170 |     |     |     |     | 175 |     |
| Arg | Glu | Asn | Ala | Ser | Val | Pro | Glu | Leu | Leu | Ala | Pro | Ile | Lys | Val | Glu |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     |     | 190 |     |
| Pro | Asp | Ser | Pro | Ser | Arg | Pro | Gly | Ala | Val | Gly | Gln | Gln | Glu | Gly | Ser |
|     |     |     | 195 |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| His | Gly | Leu | Pro | Gln | Ser | Thr | Leu | Pro | Ser | Pro | Ala | Glu | Gln | His | Gly |
|     |     |     | 210 |     |     |     | 215 |     |     |     | 220 |     |     |     |     |
| Ala | Gln | Asp | Thr | Glu | Leu | Ser | Ala | Gly | Thr | Gly | Asn | Phe | Tyr | Leu | Val |

1579

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<210> 2110

<211> 233

<212> PRT

<213> Homo sapiens

<400> 2110

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| Xaa | Ala | Ser | Pro | Thr | Gln | Thr | Met | Ala | Ala | Ala | Ala | Asp | Gly | Ser | Leu | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Asp | Asn | Pro | Arg | Thr | Phe | Ser | Arg | Arg | Pro | Pro | Ala | Gln | Ala | Ser | Arg |     |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |     |     |
| Gln | Ala | Lys | Ala | Thr | Lys | Arg | Lys | Tyr | Gln | Ala | Ser | Ser | Glu | Ala | Pro |     |
|     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |     |
| Pro | Ala | Lys | Arg | Arg | Asn | Glu | Thr | Ser | Phe | Leu | Pro | Ala | Lys | Lys | Thr |     |
|     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |     |
| Ser | Val | Lys | Glu | Thr | Gln | Arg | Thr | Phe | Lys | Gly | Asn | Ala | Gln | Lys | Met |     |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |     |
| Phe | Ser | Pro | Lys | Lys | His | Ser | Val | Ser | Thr | Ser | Asp | Arg | Asn | Gln | Glu |     |
|     |     |     | 85  |     |     |     | 90  |     |     |     |     |     | 95  |     |     |     |
| Glu | Arg | Gln | Cys | Ile | Lys | Thr | Ser | Ser | Leu | Phe | Lys | Asn | Asn | Pro | Asp |     |
|     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |     |     |
| Ile | Pro | Glu | Leu | His | Arg | Pro | Val | Val | Lys | Gln | Val | Gln | Glu | Lys | Val |     |
|     | 115 |     |     |     |     | 120 |     |     |     | 125 |     |     |     |     |     |     |
| Phe | Thr | Ser | Ala | Ala | Phe | His | Glu | Leu | Gly | Leu | His | Pro | His | Leu | Ile |     |
|     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |     |     |
| Ser | Thr | Ile | Asn | Thr | Val | Leu | Lys | Met | Ser | Ser | Met | Thr | Ser | Val | Gln |     |
| 145 |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |     |     |
| Lys | Gln | Ser | Ile | Pro | Val | Leu | Leu | Glu | Gly | Arg | Asp | Ala | Leu | Val | Arg |     |
|     |     |     | 165 |     |     |     | 170 |     |     |     |     |     | 175 |     |     |     |
| Ser | Gln | Thr | Gly | Ser | Gly | Lys | Ile | Leu | Ala | Tyr | Cys | Ile | Pro | Val | Val |     |
|     | 180 |     |     |     |     | 185 |     |     |     |     |     | 190 |     |     |     |     |
| Gln | Ser | Leu | Gln | Ala | Met | Glu | Ser | Lys | Ile | Gln | Arg | Ser | Asp | Gly | Pro |     |
|     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |     |     |
| Tyr | Ala | Leu | Val | Leu | Val | Pro | Thr | Arg | Glu | Val | Ser | Arg | Leu | Pro | Phe |     |
|     | 210 |     |     |     | 215 |     |     |     |     |     | 220 |     |     |     |     |     |
| Gly | Thr | Ser | Phe | Lys | His | Met | Leu | Ser |     |     |     |     |     |     |     |     |
| 225 |     |     |     |     | 230 |     |     |     |     |     |     |     |     |     |     |     |

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 <212> DNA  
 <213> Homo sapiens

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 180  
 gaaggcctgg ttgagcgtgt gcgcagtgtc cttgagcgtc tgcgtgccca agagcgcgca  
 240  
 atcatgcagc tctgcgtacg tgatgcacgc atgccgcgtg ccgacttcct gcgccagttt  
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 339

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 <212> PRT  
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 35 40 45  
 Leu Phe Met Pro Ile Lys Leu Val Pro Lys Gln Phe Glu Gly Leu Val  
 50 55 60  
 Glu Arg Val Arg Ser Ala Leu Glu Arg Leu Arg Ala Gln Glu Arg Ala  
 65 70 75 80  
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 120  
 aaagggaagt tgacattaga tagcagtttt aacatcgcca gccagcttc ccaggcctgg  
 180

at tt t t t g c a c t t c t g t c a a a a a c t g a g a a a c c a a c a t t t c t t t a c c a g a c t g a t g a a c a g  
240  
g a c t t c a c c a g c t g c t t c a t t g a g a c a t t c a a c a g t g g a t g g a a a a c c a g g a c t g t g a t  
300  
g a g c c t g c c c t g t a c c c a t g c t g c a g c c a c t g g a g c t t c c c t a c a a g c a a g a g a t t t t t  
360  
g a a c t g t g c a t c a a g a g a g c t a t c a t g g a g c t g g a a a g g a g t a c a g g g t a c c a t t t g g a t  
420  
a g c a a a a c c c c a g g g c c g a g g t t t g a t a t c a a t g a t a c t a t c a g g g c a g t g g t g t t a g a g  
480  
t t c c a g a g t a c c t a c c t c t t c a c a c t g g c t t a t g a a a a g a t g c a t c a g t t t t a t a a a g a g  
540  
g t g g a c t c g t g g a t a t c c a g t g a g t c g g c c c c t g a a g g c c t c a g c a a t g g t t g g  
600  
t t t g t c a g c a a t c t g g a g t t c t a t g a c c t c c a g g a t a g c c t c t c c g a t g g c a c c c t c a t t  
660  
g c c a t g g g g c t g t c a g t t g c t g t t g c a t t t a g c g t g a t g c t g c t g a c a a c t t g g a a c a t c  
720  
a t c a t a a g c c t t t a t g c c a t c a t t t c a a t t g c t g g a a c g a t a t t t g t c a c t g t t g g t t c t  
780  
c t t g t c c t g c t g g g c t g g g a g c t c a a t g t g t t g g a a t c t g t a c c a t t t c g g t t g c c g t c  
840  
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900  
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960  
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1020  
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1080  
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1140  
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1200  
c a a a g c a a a a c a c a t a c c a t a a a t g c t t a t c a t t t a g a t c c a g g g g c c c a a a a t c t g a a  
1260  
c t g g a g c a t g a g t t t t a t g a a t a g a a c c t c t g g c t t c c c a c a g c t g c a c t g c c c c t g a g  
1320  
a a g a c c a c t t a t g a a g a g a c c c a c a t c t g c t c t g a a t t t t t c a a c a g c c a a g c a a a g a a t  
1380  
t t a g g g a t g c c t g t g c a t g c a g c t t a c a a c a g t g a a c t c a g c a a a a g c a c t g a a a g t g a c  
1440  
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1500  
c t g a a t c a g a g a t g a g c t g c c c c c a t g c c t a c a a c a c t t g a a c t a t g g c c c a c a c t c t  
1560  
t g c c a g c a g a t g g g g g a c t g c t t g t g c c a c a g t g c t c t c t a c c a c t a g c a g c t t t g t c  
1620  
c a g a t c c a a a a c g g c g t g g c a c c t c t g a a g g c c a c a c a c c a a g c t g t c g a g g g c t t t g t g  
1680  
c a c c c c a t c a c g c a c a t c c a c c a c t g t c c c t g c c t g c a g g g c a g a g t a a a g c c a g c c g g a  
1740  
a t g c a g a a t t c t c t g c c t a g g a a t t t t t t c c t c c a c c c a g t g c a g c a c a t t c a g g c c c a a  
1800

gaaaaaattg gcaagaccaa tgtacacagt cttcagagga gcatagaaga gcatcttcca  
 1860  
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 1920  
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 1980  
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 2040  
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 2100  
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 2160  
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 2220  
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 2280  
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 2329

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<211> 758

<212> PRT

<213> Homo sapiens

<400> 2114

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Tyr | Lys | Lys | Leu | Phe | Met | Phe | Glu | Arg | Val | His | His | Gly | Glu | Glu |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Leu | His | Met | Pro | Ile | Thr | Val | Ile | Trp | Gly | Val | Ser | Pro | Glu | Asp | Asn |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gly | Asn | Pro | Leu | Asn | Pro | Lys | Ser | Lys | Gly | Lys | Leu | Thr | Leu | Asp | Ser |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Ser | Phe | Asn | Ile | Ala | Ser | Pro | Ala | Ser | Gln | Ala | Trp | Ile | Leu | His | Phe |
|     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |
| Cys | Gln | Lys | Leu | Arg | Asn | Gln | Thr | Phe | Phe | Tyr | Gln | Thr | Asp | Glu | Gln |
| 65  |     |     |     | 70  |     |     |     | 75  |     |     |     |     |     | 80  |     |
| Asp | Phe | Thr | Ser | Cys | Phe | Ile | Glu | Thr | Phe | Lys | Gln | Trp | Met | Glu | Asn |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Gln | Asp | Cys | Asp | Glu | Pro | Ala | Leu | Tyr | Pro | Cys | Cys | Ser | His | Trp | Ser |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Phe | Pro | Tyr | Lys | Gln | Glu | Ile | Phe | Glu | Leu | Cys | Ile | Lys | Arg | Ala | Ile |
|     |     | 115 |     |     |     | 120 |     |     |     |     |     | 125 |     |     |     |
| Met | Glu | Leu | Glu | Arg | Ser | Thr | Gly | Tyr | His | Leu | Asp | Ser | Lys | Thr | Pro |
|     | 130 |     |     |     | 135 |     |     |     |     |     | 140 |     |     |     |     |
| Gly | Pro | Arg | Phe | Asp | Ile | Asn | Asp | Thr | Ile | Arg | Ala | Val | Val | Leu | Glu |
| 145 |     |     |     | 150 |     |     |     | 155 |     |     |     |     |     | 160 |     |
| Phe | Gln | Ser | Thr | Tyr | Leu | Phe | Thr | Leu | Ala | Tyr | Glu | Lys | Met | His | Gln |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Phe | Tyr | Lys | Glu | Val | Asp | Ser | Trp | Ile | Ser | Ser | Glu | Leu | Ser | Ser | Ala |
|     | 180 |     |     |     |     |     |     | 185 |     |     |     | 190 |     |     |     |
| Pro | Glu | Gly | Leu | Ser | Asn | Gly | Trp | Phe | Val | Ser | Asn | Leu | Glu | Phe | Tyr |
|     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |     |
| Asp | Leu | Gln | Asp | Ser | Leu | Ser | Asp | Gly | Thr | Leu | Ile | Ala | Met | Gly | Leu |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Ser | Val | Ala | Val | Ala | Phe | Ser | Val | Met | Leu | Leu | Thr | Thr | Trp | Asn | Ile |

1584

|            |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| <400> 2116 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
| Met        | Gly | Thr | Cys | Phe | Pro | Ala | Pro | Glu | Ser | Pro | Pro | Ser | Pro | His | Ile |  |
| 1          |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |  |
| Gly        | Asn | Pro | Val | Gly | Ser | Arg | Ser | Ser | Glu | Pro | Arg | Arg | Ala | Glu | Ala |  |
|            |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |  |
| Gly        | Gly | Pro | Pro | Ala | Pro | Ala | Ala | His | Arg | Leu | Gly | Met | Glu | Met | Pro |  |
|            |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |  |
| Ser        | Pro | Gly | Ser | Ser | Arg | Gln | Arg | Thr | Arg | Glu | Met | Thr | Thr | Glu | Arg |  |
|            | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |  |
| His        | Thr | Pro | Ala | Pro | His | Ser | Ser | Pro | Gln | Ile | Ser | Pro | Ser | Asp |     |  |
| 65         |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |  |
| Ala        | Ala | Val | Arg | Phe | Asn | Val | Ser | Phe | Leu | Phe | Arg | Ala | Gly | Gly | Cys |  |



85 90 95  
 Gly Leu Gly Gly Leu Gln Gly Pro Lys Thr Ser Arg Trp Ala Gln Glu  
 100 105 110  
 Gly Asp Arg His Pro Pro Phe Gln Ile Leu Glu Tyr Pro Glu Ala Pro  
 115 120 125  
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 Thr Arg  
 145

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 <211> 360  
 <212> DNA  
 <213> Homo sapiens

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 240  
 accgtcattg ccaacaagat tgccgacgcc cgttcggaag gcgaccttc tgagaacggc  
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<210> 2118  
 <211> 70  
 <212> PRT  
 <213> Homo sapiens

<400> 2118  
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 Ile Ala Asn Lys Ile Ala Asp Ala Arg Ser Glu Gly Asp Leu Ser Glu  
 35 40 45  
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 50 55 60  
 Arg Ile Arg Gln Leu Glu  
 65 70

<210> 2119  
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 <212> DNA  
 <213> Homo sapiens

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 atgggctgca agggagacgc gagcggagtt tgctataaaa tgggagttct ggttgtaactc  
 180  
 actgttctgt ggctgttctc ctcaagtaaag gccgactcaa aagccattac aacctctctt  
 240  
 acaacaaaat ggttttccac tccattgttg ttagaagcca gtgagttttt agcagaagac  
 300  
 agtcaagaga aattttggaa tttttagaa gccagtcaaa atattggatc atcagatcat  
 360  
 gacggtaccg attattccta ctatcatgca atattggagg ctgcatttca gtttctgtca  
 420  
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 465

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 <211> 115  
 <212> PRT  
 <213> Homo sapiens

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 20 25 30  
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 35 40 45  
 Leu Leu Leu Glu Ala Ser Glu Phe Leu Ala Glu Asp Ser Gln Glu Lys  
 50 55 60  
 Phe Trp Asn Phe Val Glu Ala Ser Gln Asn Ile Gly Ser Ser Asp His  
 65 70 75 80  
 Asp Gly Thr Asp Tyr Ser Tyr Tyr His Ala Ile Leu Glu Ala Ala Phe  
 85 90 95  
 Gln Phe Leu Ser Pro Leu Gln Gln Asn Leu Phe Lys Phe Cys Leu Ser  
 100 105 110  
 Leu His Ala  
 115

<210> 2121  
 <211> 336  
 <212> DNA  
 <213> Homo sapiens

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 120  
 ggaggttctt ttgttacaaa atacaacaag acaaactgtc agttttatgt agataatctc  
 180  
 tactattcaa ctgactatga gtttctggtc tcttttcaca atggagtgtg cgaggagat  
 240  
 tcagttataa gaaatgagtc aacaaatttt aatgctaaag ccctgattat attcctgggt  
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tttctgatta ttgtgacatc aatagccttg cttggt  
336

<210> 2122  
<211> 112  
<212> PRT  
<213> Homo sapiens

<400> 2122  
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20 25 30  
Phe Tyr Ile Leu Val Val Arg Ser Gly Gly Ser Phe Val Thr Lys Tyr  
35 40 45  
Asn Lys Thr Asn Cys Gln Phe Tyr Val Asp Asn Leu Tyr Tyr Ser Thr  
50 55 60  
Asp Tyr Glu Phe Leu Val Ser Phe His Asn Gly Val Tyr Glu Gly Asp  
65 70 75 80  
Ser Val Ile Arg Asn Glu Ser Thr Asn Phe Asn Ala Lys Ala Leu Ile  
85 90 95  
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100 105 110

<210> 2123  
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<212> DNA  
<213> Homo sapiens

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180  
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240  
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300  
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420  
gagatc  
426

<210> 2124  
<211> 142  
<212> PRT  
<213> Homo sapiens

<400> 2124  
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Ala Ala Thr Gly Tyr Asp Ala Ile Ser Leu Gln Pro Asn Ala Gly Ser
      35           40           45
Gln Gly Glu Tyr Ala Gly Leu Leu Ala Ile Arg Ala Tyr His Gln Ser
      50           55           60
Arg Gly Asp Glu Arg Arg Asp Ile Cys Leu Ile Pro Ser Ser Ala His
      65           70           75           80
Gly Thr Asn Pro Ala Thr Ala Asn Met Ala Gly Met Arg Val Val Val
      85           90           95
Thr Ala Cys Asp Ala Arg Gly Asn Val Asp Ile Glu Asp Leu Arg Ala
      100          105          110
Lys Ala Ile Glu His Arg Glu His Leu Ala Ala Leu Met Ile Thr Tyr
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Pro Ser Thr His Gly Val Phe Glu Glu Gly Ile Arg Glu Ile
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&lt;210&gt; 2125

&lt;211&gt; 285

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2125

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ctaaaggcgg ctgaagacgc ggcaccaccg gctgtcaccg ttgaagcggc caaggaagag
180
aagccgaagc caccaccaat tggacctaaag agaggagcca aggtgagaat tcttaggaag
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gagtcatact ggttcaaagg agtgggatca gttgtgactg ttgat
285

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&lt;210&gt; 2126

&lt;211&gt; 95

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2126

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      20           25           30
Asn Thr Arg Gly Ser Arg Leu Val Leu Lys Ala Ala Glu Asp Ala Ala
      35           40           45
Pro Pro Ala Val Thr Val Glu Ala Ala Lys Glu Glu Lys Pro Lys Pro
      50           55           60
Pro Pro Ile Gly Pro Lys Arg Gly Ala Lys Val Arg Ile Leu Arg Lys
      65           70           75           80
Glu Ser Tyr Trp Phe Lys Gly Val Gly Ser Val Val Thr Val Asp
      85           90           95

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 <213> Homo sapiens

<400> 2127  
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 gcgacgcata ttccagggca cttgtcacca gtcatgccat tgggtaccat gaacccatgc  
 120  
 atgcagtact gcatgatgca acaggggctt gccagcttga tggcgtgtcc gtccttgatg  
 180  
 ctgcagcaac tgttggcctt accgcttcag acgatgccag tgatgatgcc acagatgatg  
 240  
 acgcctaaca tgatgtcacc attgatgatg ccgagcatga tgtcaccaat ggtcttgccg  
 300  
 agcatgatgt cgcaaatgat gatgccacaa tgtcactgcg acgccgtctc gcagattatg  
 360  
 ctgcaacagc agttaccatt catgttcaac ccaatggcca tgacgattcc acccatgttc  
 420  
 ttacagcaac cctttgttgg tgctgcattc taga  
 454

<210> 2128  
 <211> 150  
 <212> PRT  
 <213> Homo sapiens

<400> 2128  
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 1 5 10 15  
 Ser Ala Thr Ser Ala Thr His Ile Pro Gly His Leu Ser Pro Val Met  
 20 25 30  
 Pro Leu Gly Thr Met Asn Pro Cys Met Gln Tyr Cys Met Met Gln Gln  
 35 40 45  
 Gly Leu Ala Ser Leu Met Ala Cys Pro Ser Leu Met Leu Gln Gln Leu  
 50 55 60  
 Leu Ala Leu Pro Leu Gln Thr Met Pro Val Met Met Pro Gln Met Met  
 65 70 75 80  
 Thr Pro Asn Met Met Ser Pro Leu Met Met Pro Ser Met Met Ser Pro  
 85 90 95  
 Met Val Leu Pro Ser Met Met Ser Gln Met Met Met Pro Gln Cys His  
 100 105 110  
 Cys Asp Ala Val Ser Gln Ile Met Leu Gln Gln Gln Leu Pro Phe Met  
 115 120 125  
 Phe Asn Pro Met Ala Met Thr Ile Pro Pro Met Phe Leu Gln Gln Pro  
 130 135 140  
 Phe Val Gly Ala Ala Phe  
 145 150

<210> 2129  
 <211> 354  
 <212> DNA  
 <213> Homo sapiens

&lt;400&gt; 2129

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 ctcacgccct ttgacaagcg gcgtgatgac aacggcggtg acgggggtgg gcgcacggg  
 120  
 actatcaagg ctctccactc caaatatggg atcgggtgaac tcatccgtgc cttcagtcgg  
 180  
 gtccatgatg aacggcctaa taccgtcctt cgtatctggg gcggcgcccc agacgagaat  
 240  
 cccctcaagg tcttggtcgc ccgtcttgtc ccggacgggt cgggtggagt tcgcggtgcc  
 300  
 attgatcatt ctgaggtcag aaatgccttg ggtagtttgg acatctttgc cgcc  
 354

&lt;210&gt; 2130

&lt;211&gt; 118

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2130

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Arg | Asp | Leu | Val | Asn | Lys | Pro | Ile | Ser | Ile | Thr | Pro | Phe | Gly | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Asp | Thr | Glu | Ile | Leu | Thr | Pro | Phe | Asp | Lys | Arg | Arg | Asp | Ala | Asn | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gly | Asp | Gly | Val | Val | Arg | Ile | Gly | Thr | Ile | Lys | Ala | Leu | His | Ser | Lys |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Tyr | Gly | Ile | Gly | Glu | Leu | Ile | Arg | Ala | Phe | Ser | Arg | Val | His | Asp | Glu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Arg | Pro | Asn | Thr | Val | Leu | Arg | Ile | Trp | Gly | Gly | Gly | Pro | Asp | Glu | Asn |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Pro | Leu | Lys | Val | Leu | Ala | Arg | Arg | Leu | Val | Pro | Asp | Gly | Ser | Val | Glu |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Phe | Arg | Gly | Ala | Ile | Asp | His | Ser | Glu | Val | Arg | Asn | Ala | Leu | Gly | Ser |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Leu | Asp | Ile | Phe | Ala | Ala |     |     |     |     |     |     |     |     |     |     |
|     |     |     | 115 |     |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 2131

&lt;211&gt; 324

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2131

gcacgcggc cattgggttat gtgtgcctat tccattgggt atgtggaagg ttgggatcag  
 60  
 ccagacagtc attatgatgg tttgttacag ctgggcgagt ggggctttcg aatcaatgac  
 120  
 ctgatgaaga cggtagaggg gcgggcaggg tgcattgagt attatgaaat gctcaacgaa  
 180  
 caacgccccg acttgtctta tgacatagac ggtattgttt ataaagttga tcagattgac  
 240  
 ctgcaagaag agcttggttt tattgtcgt gcgccacgct gggcaattgc tcgaaaattt  
 300

cctgctcaag aagaagttac gcgt  
324

<210> 2132  
<211> 108  
<212> PRT  
<213> Homo sapiens

<400> 2132  
Ala Ser Arg Pro Leu Val Met Cys Ala Tyr Ser Ile Gly Tyr Val Glu  
1 5 10 15  
Gly Trp Asp Gln Pro Asp Ser His Tyr Asp Gly Leu Leu Gln Leu Gly  
20 25 30  
Glu Trp Gly Phe Arg Ile Asn Asp Leu Met Lys Thr Val Glu Gly Ala  
35 40 45  
Ala Gly Cys Ile Glu Tyr Tyr Glu Met Leu Asn Glu Gln Arg Pro Asp  
50 55 60  
Leu Ser Tyr Asp Ile Asp Gly Ile Val Tyr Lys Val Asp Gln Ile Asp  
65 70 75 80  
Leu Gln Glu Glu Leu Gly Phe Ile Ala Arg Ala Pro Arg Trp Ala Ile  
85 90 95  
Ala Arg Lys Phe Pro Ala Gln Glu Glu Val Thr Arg  
100 105

<210> 2133  
<211> 292  
<212> DNA  
<213> Homo sapiens

<400> 2133  
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gtggctgtct ttagaggacc cggcgaactt ttcttgcttt ttcccacttg ctccatcaca  
120  
tacatcacat caccaacacc catcacatac atacacagtc atgaacggcc atcaggccac  
180  
accagattac atcgtgtggt atccaaccct gcattttcct gcccctcctt tactgcgagt  
240  
gtcacctcta cccggaaagg tcttcaacct ccaagtttcc cagtaattta tt  
292

<210> 2134  
<211> 93  
<212> PRT  
<213> Homo sapiens

<400> 2134  
Met Val Leu His Asp Met Asn Lys Phe Phe Leu Thr Leu Asn Ser Leu  
1 5 10 15  
Val Ala Val Phe Arg Gly Pro Gly Glu Leu Phe Leu Leu Phe Pro Thr  
20 25 30  
Cys Ser Ile Thr Tyr Ile Thr Ser Pro Thr Pro Ile Thr Tyr Ile His  
35 40 45  
Ser His Glu Arg Pro Ser Gly His Thr Arg Leu His Arg Cys Gly Ser

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 50  |     | 55  |     | 60  |     |     |     |     |     |     |     |     |     |     |     |
| Asn | Pro | Ala | Phe | Ser | Cys | Pro | Ser | Phe | Thr | Ala | Ser | Val | Thr | Ser | Thr |
| 65  |     |     |     | 70  |     |     |     | 75  |     |     |     |     |     | 80  |     |
| Arg | Lys | Gly | Leu | Gln | Pro | Pro | Ser | Phe | Pro | Val | Ile | Tyr |     |     |     |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     |     |     |

&lt;210&gt; 2135

&lt;211&gt; 439

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2135

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acgcgttcca ttggtgtgtc gaatttcaag accgagcatc tggacgcat cgagggggcc
60
actccgagcgc tcgaccaaact cgagatgcat ccctcgttca accaggcgac cttccgcgca
120
gagctggccgc agcgcggcat taaccggag gcttgagacc cgctgggcca gtcgaaggac
180
ctcgacaatc ccgtcctcac cgatatttcc aaggcgactg gaaagacgcc tgcccaggtg
240
gtcattcgct ggcacctgca gatcggcaac gtggtattcc ccaagtcggt gacaccatca
300
cgaattgccg agaactttga tgtgttcgat ttcgagctgt ctgacgagca gatcgccgca
360
attgatggcc tggatcacgc caacaggctc ggtggtgacc cttctaccgc cgacttctga
420
ttctgcaaca ataaccggt
439

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&lt;210&gt; 2136

&lt;211&gt; 139

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2136

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Arg | Ser | Ile | Gly | Val | Ser | Asn | Phe | Lys | Thr | Glu | His | Leu | Asp | Ala |
| 1   |     |     | 5   |     |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ile | Glu | Gly | Ala | Thr | Pro | Ser | Val | Asp | Gln | Ile | Glu | Met | His | Pro | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Phe | Asn | Gln | Ala | Thr | Phe | Arg | Ala | Glu | Leu | Ala | Glu | Arg | Gly | Ile | Asn |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Pro | Glu | Ala | Trp | Ser | Pro | Leu | Gly | Gln | Ser | Lys | Asp | Leu | Asp | Asn | Pro |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Val | Leu | Thr | Asp | Ile | Ser | Lys | Ala | Thr | Gly | Lys | Thr | Pro | Ala | Gln | Val |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Val | Ile | Arg | Trp | His | Leu | Gln | Ile | Gly | Asn | Val | Val | Phe | Pro | Lys | Ser |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Val | Thr | Pro | Ser | Arg | Ile | Ala | Glu | Asn | Phe | Asp | Val | Phe | Asp | Phe | Glu |
|     |     |     | 100 |     |     |     | 105 |     |     |     |     |     | 110 |     |     |
| Leu | Ser | Asp | Glu | Gln | Ile | Ala | Ala | Ile | Asp | Gly | Leu | Asp | His | Gly | Asn |
|     |     | 115 |     |     |     | 120 |     |     |     |     |     | 125 |     |     |     |
| Arg | Leu | Gly | Gly | Asp | Pro | Ser | Thr | Ala | Asp | Phe |     |     |     |     |     |
|     |     | 130 |     |     |     | 135 |     |     |     |     |     |     |     |     |     |



<210> 2137  
 <211> 330  
 <212> DNA  
 <213> Homo sapiens

<400> 2137  
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 120  
 aagaaggagg agctgaagga gttccagctt ctgctcgcca ataaagcgca ctccaggagc  
 180  
 tcttccggtg agacacccgc tcagccagag aagacgagtg gcatggaggt ggctcgtac  
 240  
 ctggtggctc agtatgggga gcagcgggccc tgggacctag ccctccatac ctgggagcag  
 300  
 atggggctga ggtcactgtg cgcccaagcc  
 330

<210> 2138  
 <211> 86  
 <212> PRT  
 <213> Homo sapiens

<400> 2138  
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 1 5 10 15  
 Lys Lys Glu Glu Leu Lys Glu Phe Gln Leu Leu Leu Ala Asn Lys Ala  
 20 25 30  
 His Ser Arg Ser Ser Ser Gly Glu Thr Pro Ala Gln Pro Glu Lys Thr  
 35 40 45  
 Ser Gly Met Glu Val Ala Ser Tyr Leu Val Ala Gln Tyr Gly Glu Gln  
 50 55 60  
 Arg Ala Trp Asp Leu Ala Leu His Thr Trp Glu Gln Met Gly Leu Arg  
 65 70 75 80  
 Ser Leu Cys Ala Gln Ala  
 85

<210> 2139  
 <211> 433  
 <212> DNA  
 <213> Homo sapiens

<400> 2139  
 gagcagttga gcgcccagaa caccgggatc aacagcaacc tgctggacat ggccggccag  
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 gtgaacaagc tggcgagtac catcgcccag tacaacgata agatttccaa agtcaccacc  
 120  
 gccgcgggtg ccccgaaacga cctgctggac cagcgcagcg aggcgggtgcg ccagttgtcc  
 180  
 gagctggtcg ggacccaggt ggtccagcgc ggttcgagtt atgacgtcta tatcggcagc  
 240  
 ggtcagcgcc tggatgatggg caacagcacc aacaccctgt ccgcagtgcc gagcaaggac  
 300

gacccgagcc agtcggcctt gcagctggat cgcggcacca gcaccgtcga tatcacctcc  
 360  
 acggtgaccg gtggcgagat cgggtgtctg ctgcgctatc gcagcgatgt gctcgacccg  
 420  
 tcgatcaacg cgt  
 433

<210> 2140  
 <211> 144  
 <212> PRT  
 <213> Homo sapiens

<400> 2140  
 Glu Gln Leu Ser Ala Gln Asn Thr Gly Ile Asn Ser Asn Leu Ser Asp  
 1 5 10 15  
 Met Ala Gly Gln Val Asn Lys Leu Ala Ser Thr Ile Ala Gln Tyr Asn  
 20 25 30  
 Asp Gln Ile Ser Lys Val Thr Thr Ala Ala Gly Ala Pro Asn Asp Leu  
 35 40 45  
 Leu Asp Gln Arg Ser Glu Ala Val Arg Gln Leu Ser Glu Leu Val Gly  
 50 55 60  
 Thr Gln Val Val Gln Arg Gly Ser Ser Tyr Asp Val Tyr Ile Gly Ser  
 65 70 75 80  
 Gly Gln Arg Leu Val Met Gly Asn Ser Thr Asn Thr Leu Ser Ala Val  
 85 90 95  
 Pro Ser Lys Asp Asp Pro Ser Gln Ser Ala Leu Gln Leu Asp Arg Gly  
 100 105 110  
 Thr Ser Thr Val Asp Ile Thr Ser Thr Val Thr Gly Gly Glu Ile Gly  
 115 120 125  
 Gly Leu Leu Arg Tyr Arg Ser Asp Val Leu Asp Pro Ser Ile Asn Ala  
 130 135 140

<210> 2141  
 <211> 426  
 <212> DNA  
 <213> Homo sapiens

<400> 2141  
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 gtttatcctt atctttcttt ccgcttgatc aatgatatgg tggataaagg cgaagtgtta  
 120  
 ggtgacccaa ttgcttgta tgttaaataat cgtaaaggta ttaacaaagg cttgatgaaa  
 180  
 atcctgtcta aaatgggtat ttcaacgatt gcctcttata gtggtgcgca attgtttgaa  
 240  
 gcggttggtc tggataactaa agtggtcgac ctttgtttca aaggcgttgc aagtcgtatc  
 300  
 aaaggtgctc gttttgaaga tttccagcgt gatcaagcaa cgattgcaa taatgcttgg  
 360  
 aagttacgta aacctattca acaggggcgt tatcttaaata acgtacatga ctctgagtat  
 420  
 cacgcg  
 426

<210> 2142  
 <211> 142  
 <212> PRT  
 <213> Homo sapiens

<400> 2142  
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 1 5 10 15  
 Gly Ala Thr Ala Val Tyr Pro Tyr Leu Ser Phe Arg Leu Ile Asn Asp  
 20 25 30  
 Met Val Asp Lys Gly Glu Val Leu Gly Asp Pro Ile Ala Cys His Val  
 35 40 45  
 Lys Tyr Arg Lys Gly Ile Asn Lys Gly Leu Met Lys Ile Leu Ser Lys  
 50 55 60  
 Met Gly Ile Ser Thr Ile Ala Ser Tyr Arg Gly Ala Gln Leu Phe Glu  
 65 70 75 80  
 Ala Val Gly Leu Asp Thr Lys Val Val Asp Leu Cys Phe Lys Gly Val  
 85 90 95  
 Ala Ser Arg Ile Lys Gly Ala Arg Phe Glu Asp Phe Gln Arg Asp Gln  
 100 105 110  
 Ala Thr Ile Ala Asn Asn Ala Trp Lys Leu Arg Lys Pro Ile Gln Gln  
 115 120 125  
 Gly Gly Tyr Leu Lys Tyr Val His Asp Ser Glu Tyr His Ala  
 130 135 140

<210> 2143  
 <211> 1008  
 <212> DNA  
 <213> Homo sapiens

<400> 2143  
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 tgtcatattg tacgcagtat gtcttttcaa cgattcttgg cgggggtggc agccatcttg  
 120  
 cttctcctgc ctactgcgtg cgctgatgat gcgcaggcgc ccgttgctga taacctcggg  
 180  
 acggtcctca gcccctccaa ctccctcatt cgcgagccgg cgaattcgtc agtcaacggg  
 240  
 acgctcaaga gcacatatga gtacctcggg ctcatcgacg gtcacgatct acccgacgac  
 300  
 gatggctacg ctcatgatca tctggctcgg gctttgcgcc cgtatttggt gaatggtgga  
 360  
 gacagtcggc agggccacgt caccctaactc atggcggcgt catccctgaa aaccctcaac  
 420  
 gcgttgctcg acaaggagag atcagaggtc gacaaacgta cccgcctgcc gaagggctgc  
 480  
 atcacgagaa agacggtgat gacggatctg cccatcgaga cgatgaggcg ggagatcggc  
 540  
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 600  
 gtcgggtggg cgatgcaggc gctggccagt gccgacctat tcagcaatgc taaggacgcc  
 660

gagaaatggg ggtgggagtc gatctcggac gggatatttgc gccatctcga gacctacagt  
 720  
 ggcccgagta cgactatcgc gatggccttg tcggcggcga ataccgtctc tacattgtct  
 780  
 cgttcccagt tgcaacgcat cggcgacagt ctgcgggatg cgccatatcc gaggaaggac  
 840  
 cttgggtccg cgctcattcg caatggaaag ccggtcaagg acaagtgcag tatcgaatcg  
 900  
 gcgtacctgt tgaggtattc cgggaattgg gcgtgggtgac atgacgggtt cttggcaagg  
 960  
 tgtgaccaag acattcccct cgggcgattc cgcgcggtgg ggggtgcac  
 1008

<210> 2144

<211> 307

<212> PRT

<213> Homo sapiens

<400> 2144

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Phe | Thr | Gly | Asp | Ala | Val | Val | Ile | Val | Glu | Val | Ser | Gln | Leu | Cys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| His | Ile | Val | Arg | Ser | Met | Ser | Phe | Gln | Arg | Phe | Leu | Ala | Gly | Val | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ala | Ile | Leu | Leu | Leu | Leu | Pro | Thr | Ala | Cys | Ala | Asp | Asp | Ala | Gln | Ala |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Pro | Val | Val | Asp | Asn | Leu | Gly | Thr | Val | Leu | Ser | Pro | Ser | Asn | Ser | Leu |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Ile | Arg | Glu | Pro | Ala | Asn | Ser | Ser | Val | Asn | Gly | Thr | Leu | Lys | Ser | Thr |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Tyr | Glu | Tyr | Leu | Arg | Leu | Ile | Asp | Gly | His | Asp | Leu | Pro | Asp | Asp | Asp |
|     |     |     |     | 85  |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Gly | Tyr | Ala | His | Asp | His | Leu | Val | Ala | Ala | Leu | Arg | Pro | Tyr | Leu | Val |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Asn | Gly | Gly | Asp | Ser | Arg | Gln | Ala | His | Val | Thr | Gln | Leu | Met | Ala | Ala |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Ser | Ser | Leu | Lys | Thr | Leu | Asn | Ala | Leu | Ser | Asp | Lys | Glu | Arg | Ser | Glu |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Val | Asp | Lys | Arg | Thr | Arg | Leu | Pro | Lys | Gly | Cys | Ile | Thr | Arg | Lys | Thr |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Val | Met | Thr | Asp | Leu | Pro | Ile | Ala | Thr | Met | Arg | Arg | Glu | Ile | Gly | Leu |
|     |     |     |     | 165 |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Ser | Asn | Asp | Gly | Leu | Cys | Leu | Thr | Pro | Trp | Lys | Val | Lys | Thr | Thr | Ser |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Ser | Glu | Glu | Ala | Arg | Trp | Ala | Met | Gln | Ala | Leu | Ala | Ser | Ala | Asp | Leu |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Phe | Ser | Asn | Ala | Lys | Asp | Ala | Glu | Lys | Trp | Gly | Trp | Glu | Ser | Ile | Ser |
|     |     | 210 |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Asp | Gly | Tyr | Leu | Arg | His | Leu | Glu | Thr | Tyr | Ser | Gly | Pro | Ser | Thr | Thr |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     | 240 |     |
| Ile | Ala | Met | Ala | Leu | Ser | Ala | Ala | Asn | Thr | Val | Ser | Thr | Leu | Ser | Arg |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Ser | Gln | Leu | Gln | Arg | Ile | Gly | Asp | Ser | Leu | Ala | Asp | Ala | Pro | Tyr | Pro |
|     |     |     | 260 |     |     |     | 265 |     |     |     |     |     | 270 |     |     |
| Arg | Lys | Asp | Leu | Gly | Pro | Ala | Leu | Ile | Arg | Asn | Gly | Lys | Pro | Val | Lys |

275                      280                      285  
 Asp Lys Cys Ser Ile Glu Ser Ala Tyr Leu Leu Arg Tyr Ser Gly Asn  
 290                      295                      300  
 Trp Ala Trp  
 305

<210> 2145  
 <211> 389  
 <212> DNA  
 <213> Homo sapiens

<400> 2145  
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 atgacaaccc ttgaacaatc attatctcaa attcccgcac ttctgattat tcatgaacat  
 120  
 ttatttagct cggcccagcc ttctgctgaa caactaaaat tgattaaaga gtttggttgt  
 180  
 agcacagtca ttaaccttgc tttaactaat gttcaaatac atcttgagaa tgaagaccgt  
 240  
 atttggttag accttggttt aaattatatt catattccaa ttgattggga gatgccttct  
 300  
 gctgagcagt gcttattagt ttagattttg attgatcatt tagtgcaaaa tgaattgtt  
 360  
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 389

<210> 2146  
 <211> 109  
 <212> PRT  
 <213> Homo sapiens

<400> 2146  
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 1                      5                      10                      15  
 Ile His Glu His Leu Phe Ser Ser Ala Gln Pro Ser Ala Glu Gln Leu  
 20                      25                      30  
 Lys Leu Ile Lys Glu Phe Gly Cys Ser Thr Val Ile Asn Leu Ala Leu  
 35                      40                      45  
 Thr Asn Ala Ser Asn His Leu Glu Asn Glu Asp Arg Ile Cys Leu Asp  
 50                      55                      60  
 Leu Gly Leu Asn Tyr Ile His Ile Pro Ile Asp Trp Glu Met Pro Ser  
 65                      70                      75                      80  
 Ala Glu Gln Cys Leu Leu Val Leu Asp Leu Ile Asp His Leu Val Gln  
 85                      90                      95  
 Asn Glu Ile Val Trp Ile His Cys Ala Lys Asn Lys Arg  
 100                      105

<210> 2147  
 <211> 235  
 <212> DNA  
 <213> Homo sapiens

<400> 2147

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 120  
 acatgtgccc agcagctgtg gtgtcccggc cagccctgtc tcccacctgc cacgtgtgtg  
 180  
 gcggaggcca cgttccgcga ggggtcccccc gccgcgttca gcgggcacaa cgcgt  
 235

<210> 2148  
 <211> 78  
 <212> PRT  
 <213> Homo sapiens

<400> 2148  
 Leu Pro Ala Gly Cys Val Ser Glu Asp Met Cys Ser Pro Asp Pro Cys  
 1 5 10 15  
 Phe Asn Gly Gly Thr Cys Leu Val Thr Trp Asn Asp Phe His Cys Thr  
 20 25 30  
 Cys Pro Ala Asn Phe Thr Gly Pro Thr Cys Ala Gln Gln Leu Trp Cys  
 35 40 45  
 Pro Gly Gln Pro Cys Leu Pro Pro Ala Thr Cys Val Ala Glu Ala Thr  
 50 55 60  
 Phe Arg Glu Gly Pro Pro Ala Ala Phe Ser Gly His Asn Ala  
 65 70 75

<210> 2149  
 <211> 1474  
 <212> DNA  
 <213> Homo sapiens

<400> 2149  
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 120  
 caacacgtgg gagtaagact tctcctgctc tttgccagtg gtctgagggtg atgaaccacc  
 180  
 ctggcttgggt gtgctgtgtc cagcaaacta caggggtgcc gctggtagtt atgggtgaaac  
 240  
 cagacacttt tcttatccac gagattaaga ctcttctgctc taaagcgaag atccaagaca  
 300  
 tggttgctat taggcacacg gcctgcaatg agcagcagcg gacaacaatg attctgctgt  
 360  
 gtgaggatgg cagcctgcgc atttacctgg ccaacgtgga gaacacctcc tactggctgc  
 420  
 agccatccct gcagcccagc agtgtcatca gcatcatgaa gcctgttcga aagcgcaaaa  
 480  
 cagctacaat cacaaccng cacgtctagc caggtgactt tccccattga cttttttgaa  
 540  
 cacaaccagc agctgacaga tgtggagttt ggtggtaacg acctcctaca ggtctataat  
 600  
 gcacaacaga taaaacaccg gctgaattcc actggcatgt atgtggccaa caccaagccc  
 660

ggaggcttca ccattgagat tagtaacaac aatagcacta tggatgatgac aggcattgcgg  
 720  
 atccagattg ggactcaagc aatagaacgg gccccgtcat atatcgagat cttcggcaga  
 780  
 actatgcagc tcaacctgag tcgctcacgc tggtttgact tccccttcac cagagaagaa  
 840  
 gccctgcagg ctgataagaa gctgaacctc ttcattgggg cctcgggtgga tccagcagg  
 900  
 gtcaccatga tagatgctgt aaaaatttat ggcaagacta aggagcagtt tggctggcct  
 960  
 gatgagcccc cagaagaatt cccttctgcc tctgtcagca acatctgccc ttcaaatctg  
 1020  
 aaccagagca acggcactgg agatagcgac tcagctgccc ccactacgac cagtgggaact  
 1080  
 gtcctggaga ggctggttgt gagttcttta gaagccctgg aaagctgctt tgccgttggc  
 1140  
 ccaatcatcg agaaggagag aaacaagaat gctgctcagg agctggccac tttgctgttg  
 1200  
 tccctgccag cacctgccag tgtccagcag cagtccaaga gccttctggc cagcctgcac  
 1260  
 accagcgcgt cggcctacca cagccacaag gtaactgttc tctcagggaa aggaaattgc  
 1320  
 agtgctgaca gggaatcaaa taagttagct cttcattgta aagcaacagc acagcaaagt  
 1380  
 aaggtagagg gaggatagca ttcagattag acctacattt tacagagttt ctctgagaa  
 1440  
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<210> 2150

<211> 312

<212> PRT

<213> Homo sapiens

<400> 2150

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Leu | Phe | Glu | Ser | Ala | Lys | Gln | Leu | Gln | Ser | Gln | Pro | Xaa | Thr | Ser |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Ser | Gln | Val | Thr | Phe | Pro | Ile | Asp | Phe | Phe | Glu | His | Asn | Gln | Gln | Leu |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Thr | Asp | Val | Glu | Phe | Gly | Gly | Asn | Asp | Leu | Leu | Gln | Val | Tyr | Asn | Ala |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Gln | Gln | Ile | Lys | His | Arg | Leu | Asn | Ser | Thr | Gly | Met | Tyr | Val | Ala | Asn |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Thr | Lys | Pro | Gly | Gly | Phe | Thr | Ile | Glu | Ile | Ser | Asn | Asn | Asn | Ser | Thr |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |
| Met | Val | Met | Thr | Gly | Met | Arg | Ile | Gln | Ile | Gly | Thr | Gln | Ala | Ile | Glu |
|     |     |     |     | 85  |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Arg | Ala | Pro | Ser | Tyr | Ile | Glu | Ile | Phe | Gly | Arg | Thr | Met | Gln | Leu | Asn |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Leu | Ser | Arg | Ser | Arg | Trp | Phe | Asp | Phe | Pro | Phe | Thr | Arg | Glu | Glu | Ala |
|     |     | 115 |     |     |     | 120 |     |     |     |     |     | 125 |     |     |     |
| Leu | Gln | Ala | Asp | Lys | Lys | Leu | Asn | Leu | Phe | Ile | Gly | Ala | Ser | Val | Asp |
|     |     | 130 |     |     |     | 135 |     |     |     |     |     | 140 |     |     |     |
| Pro | Ala | Gly | Val | Thr | Met | Ile | Asp | Ala | Val | Lys | Ile | Tyr | Gly | Lys | Thr |

[illegible]

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<210> 2151
<211> 511
<212> DNA
<213> Homo sapiens
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<400> 2151
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caccaaagcc tgnncgggtg ccggcgcnng cggcagcact ttcatactt catgggctgg
120
gtgcatcagc gctcctttca gttgaccggg atcgccgatc cattgcgggc gctggctcgt
180
gagctggcgg ccgaggtgcg ggtgctgtgt ttcgatgagc tgttcgtcaa tgacatcggt
240
gacgcgatca ttctcgggcg cctgtttcag gtgatgttcg acgcaggcgt ggtgggtggtc
300
tgcaacctca atctgccgcc ggatcagctg tatgccgacg gcttcaaccg cgaccgcttc
360
ctgccggcga tcaccgcgat caaacagcac atgcaagtgg tcgcggtgaa tggcgcgga
420
gatcatcgct tgcattcccg cgccatcgag cagcgttact gggtcgctct gccggagcag
480
ggtagcgcgt tgagccaggt gttcgacgcg t
511
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<210> 2152
<211> 170
<212> PRT
<213> Homo sapiens
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<400> 2152  
Ala Gly Val Tyr Leu Trp Gly Pro Val Gly Arg Gly Lys Thr Trp Leu



|   |     |     |     |
|---|-----|-----|-----|
| 1   | 5   | 10  | 15  |
| Met Asp Gln Phe His Gln Ser Leu Xaa Gly Cys Arg Arg Xaa Arg Gln |     |     |     |
|   | 20  | 25  | 30  |
| His Phe His His Phe Met Gly Trp Val His Gln Arg Ser Phe Gln Leu |     |     |     |
|   | 35  | 40  | 45  |
| Thr Gly Ile Ala Asp Pro Leu Arg Ala Leu Ala Arg Glu Leu Ala Ala |     |     |     |
|   | 50  | 55  | 60  |
| Glu Val Arg Val Leu Cys Phe Asp Glu Leu Phe Val Asn Asp Ile Gly |     |     |     |
| 65  | 70  | 75  | 80  |
| Asp Ala Ile Ile Leu Gly Arg Leu Phe Gln Val Met Phe Asp Ala Gly |     |     |     |
|   | 85  | 90  | 95  |
| Val Val Val Val Cys Thr Ser Asn Leu Pro Pro Asp Gln Leu Tyr Ala |     |     |     |
|   | 100 | 105 | 110 |
| Asp Gly Phe Asn Arg Asp Arg Phe Leu Pro Ala Ile Thr Ala Ile Lys |     |     |     |
|   | 115 | 120 | 125 |
| Gln His Met Gln Val Val Ala Val Asn Gly Ala Glu Asp His Arg Leu |     |     |     |
|   | 130 | 135 | 140 |
| His Pro Gly Ala Ile Glu Gln Arg Tyr Trp Val Ala Leu Pro Glu Gln |     |     |     |
| 145   | 150 | 155 | 160 |
| Gly Ser Ala Leu Ser Gln Val Phe Asp Ala                         |     |     |     |
|   | 165 | 170 |     |

&lt;210&gt; 2153

&lt;211&gt; 528

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2153

```

nnaccggtgc caaagagctg gggatcaacc tgccgaacac cgccggtacg cagcaggtgt
60
tcagtacgtg cacggcgatt ggcggcggca attgggacca ctccgcgctg atcaagggcc
120
tggagcatat ggccaacttt tcgattcgcg atcaataagc cacaccgctc ccacctttga
180
tggcattcca agtctgaaat tgatccatct ctaataacaa aaatccccgg gagccccgtt
240
atgtcggtcg atccgcaaca cctgcttcgc gagctgtttg ccacagccat cgatgccgcc
300
cacccccggc atgtccttga accttatctg cccgctgacc gcacaggccg tgtgattgtg
360
attgggcccg gcaaaaccgc acccgccatg gccctcgctg tcgagaacgg ctggcaaggc
420
gaagtcaccg gcctggtggt caccgctac ggccacggcg cgccgtgcaa aaaaatcgaa
480
gtggtcgagg ccgctcaccg ggtgccggat gccgcgggcc tggcggtg
528

```

&lt;210&gt; 2154

&lt;211&gt; 96

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2154

Met Ser Val Asp Pro Gln His Leu Leu Arg Glu Leu Phe Ala Thr Ala

```

1           5           10           15
Ile Asp Ala Ala His Pro Arg His Val Leu Glu Pro Tyr Leu Pro Ala
           20           25           30
Asp Arg Thr Gly Arg Val Ile Val Ile Gly Pro Gly Lys Thr Ala Pro
           35           40           45
Ala Met Ala Leu Val Val Glu Asn Gly Trp Gln Gly Glu Val Thr Gly
           50           55           60
Leu Val Val Thr Arg Tyr Gly His Gly Ala Pro Cys Lys Lys Ile Glu
65           70           75           80
Val Val Glu Ala Ala His Pro Val Pro Asp Ala Ala Gly Leu Ala Val
           85           90           95

```

&lt;210&gt; 2155

&lt;211&gt; 297

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2155

```

gtgcaccgcc acggcacacc cgccatgccg cgccgctatt tcgaggccct gctgcaggag
60
ttcggccccc actgcgaggt gtcaccgtc accgattcag agggcaaccc cctcagttcg
120
gtgctcagtt tctacttccg tgatgaagtg ctgccctact atgcggggcga cgccgtcgcg
180
gcgcgcgaaac tggcggccaa tgacttcaaa tactgggagc tgatgcgacg cgccgtgctg
240
cgcgccctca aggtgtttga ctacggccgc agcaagcagg gcacgggctc ctacgcn
297

```

&lt;210&gt; 2156

&lt;211&gt; 91

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2156

```

Met Pro Arg Arg Tyr Phe Glu Ala Leu Leu Gln Glu Phe Gly Pro Asp
1           5           10           15
Cys Glu Val Leu Thr Val Thr Asp Ser Glu Gly Asn Pro Leu Ser Ser
           20           25           30
Val Leu Ser Phe Tyr Phe Arg Asp Glu Val Leu Pro Tyr Tyr Ala Gly
           35           40           45
Asp Ala Val Ala Ala Arg Glu Leu Ala Ala Asn Asp Phe Lys Tyr Trp
           50           55           60
Glu Leu Met Arg Arg Ala Cys Ala Arg Gly Leu Lys Val Phe Asp Tyr
65           70           75           80
Gly Arg Ser Lys Gln Gly Thr Gly Ser Tyr Ala
           85           90

```

&lt;210&gt; 2157

&lt;211&gt; 711

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2157

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 60  
 ctagcaagga tcgccaaccg agagcaccga gacatcgagg tgggggaggg agataccgtt  
 120  
 ttgctggcat cctctctcat cccgggtaat gagaatgccg tctatcgagt gattaatggc  
 180  
 ctgacgaagc ttggcgccgc cgtggtacat aagggaacg ctttgggtcca cgtttcggc  
 240  
 catgccgcag ccggagagct gctgtacgcg tataacatcg tgcggccacg cgctgtgatg  
 300  
 ccgattcatg gtgaggtgcg tcattctgtc gctaattgcc atctggccaa agcaaccggt  
 360  
 gtcgatgaga acaacgtggt gcttgtcgag gacggcgggg ttattgacct tgttgacgga  
 420  
 gtaccgcgag ttgttggtcaa ggtcgatgcc tcgtacatcc ttgttgacgg atctgggggtg  
 480  
 ggggagctta ccgaggacac gctcactgat cgccgtatcc tcggtgagga gggattcttg  
 540  
 tcagtcgtca ccgtggtcga caccgctcg gcgtcagtg tgtctcgccc ggcgatccag  
 600  
 gcgcgtggtt ttgccgaggg cgactcggtc ttccgggaga tcaccgacca gatcgtcacc  
 660  
 gagctagaga aggcgatggc cgggtggtatg gacgataccc accggttgca a  
 711

<210> 2158

<211> 237

<212> PRT

<213> Homo sapiens

<400> 2158

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Arg | Asp | Asn | Glu | Val | Val | Ile | Ile | Ser | Thr | Gly | Ser | Gln | Gly | Glu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Pro | Leu | Ser | Ala | Leu | Ala | Arg | Ile | Ala | Asn | Arg | Glu | His | Arg | Asp | Ile |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Glu | Val | Gly | Glu | Gly | Asp | Thr | Val | Leu | Leu | Ala | Ser | Ser | Leu | Ile | Pro |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |
| Gly | Asn | Glu | Asn | Ala | Val | Tyr | Arg | Val | Ile | Asn | Gly | Leu | Thr | Lys | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Gly | Ala | Ala | Val | Val | His | Lys | Gly | Asn | Ala | Leu | Val | His | Val | Ser | Gly |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| His | Ala | Ala | Ala | Gly | Glu | Leu | Leu | Tyr | Ala | Tyr | Asn | Ile | Val | Arg | Pro |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Arg | Ala | Val | Met | Pro | Ile | His | Gly | Glu | Val | Arg | His | Leu | Val | Ala | Asn |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Ala | Asp | Leu | Ala | Lys | Ala | Thr | Gly | Val | Asp | Glu | Asn | Asn | Val | Val | Leu |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Val | Glu | Asp | Gly | Gly | Val | Ile | Asp | Leu | Val | Asp | Gly | Val | Pro | Arg | Val |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Val | Gly | Lys | Val | Asp | Ala | Ser | Tyr | Ile | Leu | Val | Asp | Gly | Ser | Gly | Val |
| 145 |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     | 160 |     |
| Gly | Glu | Leu | Thr | Glu | Asp | Thr | Leu | Thr | Asp | Arg | Arg | Ile | Leu | Gly | Glu |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Glu | Gly | Phe | Leu | Ser | Val | Val | Thr | Val | Val | Asp | Thr | Arg | Ser | Ala | Ser |

<400> 2161

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 120  
 ggctatacag gggaagcctc caaagggaaa tctggaaaaa tgttctgaga gggacattaa  
 180  
 ggatgtactc agaaattaag aaaacatatt aggacttgcc aaaagtgaga gaagcaactg  
 240  
 aggagactta tatgcaaaaa tcgcaaagaa ggagagaaca aaagatggag gttggatgct  
 300  
 aaatagggaa agagaacgcg tgaatgaggt agggggcaga acatgcagtg cagaaaaaca  
 360  
 acagatatgg aagggcatta aagagggcta aatgggaata ttaggaaatg agagttggga  
 420  
 atttgtcaga gttgtgtatt aacaaggaga gggtaaggta agaaggtggc aaagtaagag  
 480  
 ccagggcata aggttttgct gtccaggaag ctttggtgga aaaatgtag aagtaatggg  
 540  
 tttggtcagt atggtgagag gtgagagagg ctaaattggga tgggcataaa gggcaggcca  
 600  
 gtggcaagaa tcctatgaaa gtgtaggcag atctgagagc acagacaaat acagtggaga  
 660  
 atgtggcaca gggcagaggg cagtgggctg agcagcgagt gcccatgggg aggggagtat  
 720  
 ccagaagaac ccattgagtc cctaagaatg acacacaggt gacagctgaa agaaggaggg  
 780  
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 agaaagtga gggttcctgc tgatgtgagg ggatgactgg aggaaaggca ggtattgact  
 900  
 ggggggtaaa ggaaccattc ttggatcaag gttatgatgg aataagaagg aagagagagc  
 960  
 tggtagctg agtaaaggac catcgataa aacagacaaa agttaagact agatggagtg  
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 1070

<210> 2162

<211> 145

<212> PRT

<213> Homo sapiens

<400> 2162

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Val | Leu | Tyr | Ser | Ala | Ser | Gln | Leu | Ser | Leu | Pro | Ser | Tyr | Ser | Ile |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Ile | Thr | Leu | Ile | Gln | Glu | Trp | Phe | Leu | Tyr | Pro | Pro | Val | Asn | Thr | Cys |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Leu | Ser | Ser | Ser | His | Pro | Leu | Thr | Ser | Ala | Gly | Thr | Leu | His | Phe | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Leu | Pro | Phe | Leu | Ser | Ser | Ser | Phe | Cys | Pro | Arg | Glu | Ser | Cys | Cys | Tyr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Ile | Phe | Cys | Val | Pro | Pro | Ser | Phe | Ser | Cys | His | Leu | Cys | Val | Ile | Leu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Arg | Asp | Ser | Met | Gly | Ser | Ser | Gly | Tyr | Ser | Pro | Pro | His | Gly | His | Ser |

85 90 95  
 Leu Leu Ser Pro Leu Pro Ser Ala Leu Cys His Ile Leu His Cys Ile  
 100 105 110  
 Cys Leu Cys Ser Gln Ile Cys Leu His Phe His Arg Ile Leu Ala Thr  
 115 120 125  
 Gly Leu Pro Phe Met Pro Ile Pro Phe Ser Leu Ser His Leu Ser Pro  
 130 135 140  
 Tyr  
 145

<210> 2163  
 <211> 657  
 <212> DNA  
 <213> Homo sapiens

<400> 2163  
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 120  
 tggttccggg ttggaagggt gggtgaaatg ggaaccgaat accaatttca cccgggaacc  
 180  
 agtaatgccc atgataaccg ccaagttggg accgaagttg ggatccataa gtacgggagg  
 240  
 ccagtggggg ggaattgggt taagccccct cccagccttt ctccgaccgc gtgctccgtc  
 300  
 agacatgcca agaggctctc tctccaggag agccacctgt gaaacccacc cggcatgctc  
 360  
 ctcccaccac tgtgcacaga cgagtgcctg ggctccagag agggagggag ctgaaggcct  
 420  
 cagacaggag tccgtcccggt ccagtcccat catccaaga aacatccggc ccgactccct  
 480  
 gcagctccat ggctcaacaa ggtgcggatg cctgctggac ctggctgctt tccatccaac  
 540  
 tttgatccct tcccaagag gaagagtgt acctaggagc aagtgtggtg cgcacaggca  
 600  
 tgcagcctgg tctcttgctc aggcggcttg cgcagattcc tagaggaatc tgcagcg  
 657

<210> 2164  
 <211> 152  
 <212> PRT  
 <213> Homo sapiens

<400> 2164  
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 Thr Gly Gly Gln Trp Gly Gly Ile Gly Leu Ser Pro Leu Pro Ala Phe  
 20 25 30  
 Leu Arg Pro Arg Ala Pro Ser Asp Met Pro Arg Gly Ser Leu Ser Arg  
 35 40 45  
 Arg Ala Thr Cys Glu Thr His Pro Ala Cys Ser Ser His His Cys Ala  
 50 55 60  
 Gln Thr Ser Ala Trp Ala Pro Glu Arg Glu Gly Ala Glu Gly Leu Arg

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Gln | Glu | Ser | Val | Pro | Ser | Ser | Pro | Ile | Ile | Pro | Arg | Asn | Ile | Arg | Pro |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     | 95  |     |     |
| Asp | Ser | Leu | Gln | Leu | His | Gly | Ser | Thr | Arg | Cys | Gly | Cys | Leu | Leu | Asp |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Leu | Ala | Ala | Phe | His | Pro | Thr | Leu | Ile | Pro | Ser | Pro | Arg | Gly | Arg | Val |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Leu | Pro | Arg | Asp | Lys | Cys | Gly | Ala | His | Arg | His | Ala | Ala | Trp | Ser | Leu |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Ala | Gln | Ala | Ala | Cys | Ala | Asp | Ser |     |     |     |     |     |     |     |     |
| 145 |     |     |     |     | 150 |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 2165

&lt;211&gt; 962

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2165

```

nctttctcat cgacagcgac gcacaaccgg cgacatcacc ggtgacgggt caaggtggca
60
gccccgagggc ccgccgtgaa cttattgtgt cgtcttatgg aagaaaagtc actcggaggt
120
accgtaaadc accccagcgc ctcaccccc gaactctgtc gccatctgct gtcgccccctg
180
cgcttaagga atcacccac tagactgacc gaagtctcgc cgagggaggg tagggagggt
240
taggtggcca ggaatgacat cgggacgacg tctacgcgtc gaataggcag cggacgtacg
300
tcgagtaccg gccgtacggt ggtgtcttct gaccgcacac gcagagctat cgctaaaaga
360
ttgatggccc gcacctcagc tatgacgacg gccactctag aggaaatggg tcgtcgacac
420
tcctgggtcc gtgatctgtc agccgaagaa agatcgtgga tctcgatcgt ggctcgctca
480
ggtattgacg gcttcgtcca gtggtttgct gacgatgacg ccgagcccta ctccccacc
540
gacgtcttcg acgtggcgcc ccggtccatg acccgcaaga tctccttgca ccagacagtc
600
gagctcgtcc gcaccacgat tgacgtcgtt gaggcacaaa ttgagaccga aatgccacgc
660
ggtgatcgcc aagtgtcgc cactgccatc gttcactact cccgcgaggt ggccttcgcc
720
gccgccgagg ttacgcgcg agccgccgaa cgtcgcggta cctgggatga acgtctggaa
780
tccctcgtcg ttgatgccgt cgtgcgagcc gacgccgatg aacagctcat ctgcgagct
840
tctactctcg gctggcgccc gggcatcaac ctctgcgtcg ttgtcgggcg ggccccgacg
900
accgagcatg aactccacgt gctgcgacgt gatggagaac gcatgcagat gacggtgcta
960
gc
962

```

&lt;210&gt; 2166

<211> 239  
 <212> PRT  
 <213> Homo sapiens

<400> 2166  
 Val Ala Arg Asn Asp Ile Gly Thr Thr Ser Thr Arg Arg Ile Gly Ser  
 1 5 10 15  
 Gly Arg Thr Ser Ser Thr Gly Arg Thr Val Val Ser Ser Asp Arg Thr  
 20 25 30  
 Arg Arg Ala Ile Ala Lys Arg Leu Met Ala Arg Thr Ser Ala Met Thr  
 35 40 45  
 Thr Ala Thr Leu Glu Glu Met Gly Arg Arg His Ser Trp Phe Arg Asp  
 50 55 60  
 Leu Ser Ala Glu Glu Arg Ser Trp Ile Ser Ile Val Ala Arg Ser Gly  
 65 70 75 80  
 Ile Asp Gly Phe Val Gln Trp Phe Ala Asp Asp Asp Ala Glu Pro Tyr  
 85 90 95  
 Ser Pro Thr Asp Val Phe Asp Val Ala Pro Arg Ser Met Thr Arg Lys  
 100 105 110  
 Ile Ser Leu His Gln Thr Val Glu Leu Val Arg Thr Thr Ile Asp Val  
 115 120 125  
 Val Glu Ala Gln Ile Glu Thr Glu Met Pro Arg Gly Asp Arg Gln Val  
 130 135 140  
 Leu Arg Thr Ala Ile Val His Tyr Ser Arg Glu Val Ala Phe Ala Ala  
 145 150 155 160  
 Ala Glu Val Tyr Ala Arg Ala Ala Glu Arg Arg Gly Thr Trp Asp Glu  
 165 170 175  
 Arg Leu Glu Ser Leu Val Val Asp Ala Val Val Arg Ala Asp Ala Asp  
 180 185 190  
 Glu Gln Leu Ile Ser Arg Ala Ser Thr Leu Gly Trp Arg Pro Gly Ile  
 195 200 205  
 Asn Leu Cys Val Val Val Gly Arg Ala Pro Thr Thr Glu His Glu Leu  
 210 215 220  
 His Val Leu Arg Arg Asp Gly Glu Arg Met Gln Met Thr Val Leu  
 225 230 235

<210> 2167  
 <211> 325  
 <212> DNA  
 <213> Homo sapiens

<400> 2167  
 accggtgcag tttgtgaggg gttggtgacg cccgatcggg aggttcacgc cgtcacggcg  
 60  
 catccacatt atcccgactg gaagatctcg ccagggttacg gacagtgggc gcgtagcgaa  
 120  
 cagatcgaca gtgtgactgt gacgcgagtc agacacttcg tcccgcggcg tcccacggcg  
 180  
 attcttcgag cgggtgtctga ggtgacgttc gggttgcgtc tctgcgccgt ccgttggcga  
 240  
 agcaccgcgg cgattgtggc tgtgtcgccg gccttgcctc cgacgcggtc gcgcgggctg  
 300  
 tgcgctgac tcccacagca taccc  
 325



<210> 2168  
 <211> 108  
 <212> PRT  
 <213> Homo sapiens

<400> 2168  
 Thr Gly Ala Val Cys Glu Gly Leu Val Thr Pro Asp Arg Glu Val His  
 1 5 10 15  
 Ala Val Thr Ala His Pro His Tyr Pro Asp Trp Lys Ile Ser Pro Gly  
 20 25 30  
 Tyr Gly Gln Trp Ser Arg Ser Glu Gln Ile Asp Ser Val Thr Val Thr  
 35 40 45  
 Arg Val Arg His Phe Val Pro Arg Arg Pro Thr Ala Ile Leu Arg Ala  
 50 55 60  
 Val Ser Glu Val Thr Phe Gly Leu Arg Leu Cys Ala Val Arg Trp Arg  
 65 70 75 80  
 Ser Thr Ala Ala Ile Val Ala Val Ser Pro Ala Leu Leu Ser Thr Arg  
 85 90 95  
 Ser Arg Gly Ser Cys Ala Asp Leu Pro Gln His Thr  
 100 105

<210> 2169  
 <211> 309  
 <212> DNA  
 <213> Homo sapiens

<400> 2169  
 gaggacgcct acgtgctcat caccagggc aagatctcgg cgatcgccga cgtcctgccc  
 60  
 atcctggaga aggtcgtcaa ggccggcaag ccgctgctcg tcatcgccga ggacatcgac  
 120  
 ggggaggccc tgtccaccct cgtcgtcaat aagatccgcg gtaccttcag ctcggtggca  
 180  
 gtcaaggcgc ccggcttcgg tgaccgccgc aaggcaatgc tgcaggacat cgccaccctc  
 240  
 accggtggtc aggtcgtcgc tcccagaggtt gggctcaagc tcgaccaggt gggcctcgag  
 300  
 gttcagggc  
 309

<210> 2170  
 <211> 103  
 <212> PRT  
 <213> Homo sapiens

<400> 2170  
 Glu Asp Ala Tyr Val Leu Ile Thr Gln Gly Lys Ile Ser Ala Ile Ala  
 1 5 10 15  
 Asp Val Leu Pro Ile Leu Glu Lys Val Val Lys Ala Gly Lys Pro Leu  
 20 25 30  
 Leu Val Ile Ala Glu Asp Ile Asp Gly Glu Ala Leu Ser Thr Leu Val  
 35 40 45  
 Val Asn Lys Ile Arg Gly Thr Phe Ser Ser Val Ala Val Lys Ala Pro

```

      50              55              60
Gly Phe Gly Asp Arg Arg Lys Ala Met Leu Gln Asp Ile Ala Thr Leu
65              70              75              80
Thr Gly Gly Gln Val Val Ala Pro Glu Val Gly Leu Lys Leu Asp Gln
      85              90              95
Val Gly Leu Glu Val Gln Gly
      100

```

<210> 2171  
 <211> 518  
 <212> DNA  
 <213> Homo sapiens

```

<400> 2171
cgcgtaaatgt gtattaaggt ccttggtggc tgcacgcgc gttatgcagc aatcgggtgat
60
atcatcaaag tttcagtga ggaagcaatt cctcgcggaa aaattaaaaa aggtaaatgtt
120
cattcagctg tggtagtgcg taccagaaaa ggtgtacgtc gtcccgatgg ttctgttatt
180
cgttttgatc gcaacgcagc gggtatcttg aatgcaaaca accagccagt cggtagacgt
240
atctttggcc ctgtaaccgc tgagcttcga aatgaaaatt tcatgaagat tgtttcactg
300
gcgccagaag tactgtaagg aaccgaaaat ggcagcaaaa ataaaacgtg acgatgaagt
360
aattgttatt gccggtaaag ataaaggtaa aactgggaaa gtttctcaag ttttaactaa
420
cggtaaagta attattgaag gtgtaaatgt tcaaaagaaa caccaaaaac caaacctca
480
agcgggcggtg gaaggcggaa tcattgaaca gaatgcat
518

```

<210> 2172  
 <211> 105  
 <212> PRT  
 <213> Homo sapiens

```

<400> 2172
Arg Val Met Cys Ile Lys Val Leu Gly Gly Ser His Arg Arg Tyr Ala
1              5              10              15
Ala Ile Gly Asp Ile Ile Lys Val Ser Val Lys Glu Ala Ile Pro Arg
20              25              30
Gly Lys Ile Lys Lys Gly Asn Val His Ser Ala Val Val Val Arg Thr
35              40              45
Arg Lys Gly Val Arg Arg Pro Asp Gly Ser Val Ile Arg Phe Asp Arg
50              55              60
Asn Ala Ala Val Ile Leu Asn Ala Asn Asn Gln Pro Val Gly Thr Arg
65              70              75              80
Ile Phe Gly Pro Val Thr Arg Glu Leu Arg Asn Glu Asn Phe Met Lys
85              90              95
Ile Val Ser Leu Ala Pro Glu Val Leu
100              105

```

<210> 2173  
 <211> 475  
 <212> DNA  
 <213> Homo sapiens

<400> 2173  
 nntggggaag aaatgccggt gcatgcactt tgtgcagcat taggtgcagg ggtgatgcag  
 60  
 cgggcgcggtg ccttttgctg cggggtttcg agcattcatc tggatgcagc attttcgcat  
 120  
 gcatttcttg taccctcgtc atgcgtttct ccccatgcac acacattatc gcctttgcac  
 180  
 ccgcaggac gcatggaata cctcgtgaaa tggaaggat ggtcgcagaa gtacagcaca  
 240  
 tgggaaccgg aggaaaacat cctggatgct cgcttgctcg cagcctttga ggaaaggaa  
 300  
 agagagatgg agctctatgg ccccaaaaag cgtggacca agcccaaac cttcctctc  
 360  
 aaagcgagg ccaaggcaaa ggccaaaact tacgagtttc gaagtgactc agccaggggc  
 420  
 atccgcatcc cctaccctgg ccgctcgccc caggacctgg cctccacttc ccggg  
 475

<210> 2174  
 <211> 158  
 <212> PRT  
 <213> Homo sapiens

<400> 2174  
 Xaa Gly Glu Glu Met Pro Val His Ala Leu Cys Ala Ala Leu Gly Ala  
 1 5 10 15  
 Gly Val Met Gln Arg Ala Arg Ala Phe Cys Gly Gly Val Ser Ser Ile  
 20 25 30  
 His Leu Val His Ala Phe Ser His Ala Phe Leu Val Ser Ser Ser Cys  
 35 40 45  
 Val Ser Pro His Ala His Thr Leu Ser Pro Leu His Pro Gln Gly Arg  
 50 55 60  
 Met Glu Tyr Leu Val Lys Trp Lys Gly Trp Ser Gln Lys Tyr Ser Thr  
 65 70 75 80  
 Trp Glu Pro Glu Glu Asn Ile Leu Asp Ala Arg Leu Leu Ala Ala Phe  
 85 90 95  
 Glu Glu Arg Glu Arg Glu Met Glu Leu Tyr Gly Pro Lys Lys Arg Gly  
 100 105 110  
 Pro Lys Pro Lys Thr Phe Leu Leu Lys Ala Gln Ala Lys Ala Lys Ala  
 115 120 125  
 Lys Thr Tyr Glu Phe Arg Ser Asp Ser Ala Arg Gly Ile Arg Ile Pro  
 130 135 140  
 Tyr Pro Gly Arg Ser Pro Gln Asp Leu Ala Ser Thr Ser Arg  
 145 150 155

<210> 2175  
 <211> 462  
 <212> DNA  
 <213> Homo sapiens

&lt;400&gt; 2175

cgcgacaccc tctttggtgg gcgccttctt tctccgaatt cgcgaaacct ccagactctg  
 60  
 gcccaggagg ttgtcgagcg tggagccgat atcggcattg ccactgatgg tgacgcagac  
 120  
 cgcctcggtg tcattgatga ccaggggcat ttcttgcac ccaaccagat cctcgtattg  
 180  
 ctgtacacct accttctgga ggacaaggga tggcaggtgc cctgcgtgcg taacctcgcg  
 240  
 acgaccaccc tgcttgaccg tgtcgccgag gccacgggc agacctgtta cgaggtaccg  
 300  
 gtcggattta agtgggtgtc gtccaagatg gccgagacca acgccgtcat cgggtggtgag  
 360  
 tcctccggtg gtttgaccgt ccaggggcat attgcaggca aggatggtgt ctatgctggc  
 420  
 accctgctgg tggaaatgat cgccaagcgg ggtaagaagc tt  
 462

&lt;210&gt; 2176

&lt;211&gt; 154

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2176

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Asp | Thr | Leu | Phe | Gly | Gly | Arg | Leu | Pro | Ser | Pro | Asn | Ser | Arg | Thr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Leu | Gln | Thr | Leu | Ala | Gln | Glu | Val | Val | Glu | Arg | Gly | Ala | Asp | Ile | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ile | Ala | Thr | Asp | Gly | Asp | Ala | Asp | Arg | Leu | Gly | Ile | Ile | Asp | Asp | Gln |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Gly | His | Phe | Leu | His | Pro | Asn | Gln | Ile | Leu | Val | Leu | Leu | Tyr | Thr | Tyr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Leu | Leu | Glu | Asp | Lys | Gly | Trp | Gln | Val | Pro | Cys | Val | Arg | Asn | Leu | Ala |
| 65  |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     | 80  |     |
| Thr | Thr | His | Leu | Leu | Asp | Arg | Val | Ala | Glu | Ala | His | Gly | Gln | Thr | Cys |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Tyr | Glu | Val | Pro | Val | Gly | Phe | Lys | Trp | Val | Ser | Ser | Lys | Met | Ala | Glu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Thr | Asn | Ala | Val | Ile | Gly | Gly | Glu | Ser | Ser | Gly | Gly | Leu | Thr | Val | Gln |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Gly | His | Ile | Ala | Gly | Lys | Asp | Gly | Val | Tyr | Ala | Gly | Thr | Leu | Leu | Val |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Glu | Met | Ile | Ala | Lys | Arg | Gly | Lys | Lys | Leu |     |     |     |     |     |     |
| 145 |     |     |     |     |     | 150 |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 2177

&lt;211&gt; 478

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2177

ctcgagaatc atgacggcga cgacgtgact atctccaccc gtgtgcctcg tgacggcggg  
 60

accttggact cgattgtcgg cgtgctggcc ggggcatcct ggtatcagcg ggagatccac  
 120  
 gacttttttg gtgtgaggtt tgtcggccct ggggcagatg atcgtgccct ccttgtccac  
 180  
 gatgcaccga aaccgcccct gcgcaaggaa gctgtgttgg cgcagcgagc tgacaccgtg  
 240  
 tggccgggtg cggctgacca ggctggctcg aagtccgcga gtcgacgtct gccggtcggc  
 300  
 gttcctgacc ctgagacgtg gcggcgtatc aaagacggcg aggatattcc ggatgccgag  
 360  
 gtcacgcgg ccatgtcttg ccggcgcccg cgatcagctg cccgtcgaat ggcaagcacg  
 420  
 gcgtcaggca ggcaggcatg agacattcga ctatcaacct tgacgtcgac gcgtgcac  
 478

<210> 2178

<211> 146

<212> PRT

<213> Homo sapiens

<400> 2178

Leu Glu Asn His Asp Gly Asp Asp Val Thr Ile Ser Thr Arg Val Pro  
 1 5 10 15  
 Arg Asp Gly Gly Thr Leu Asp Ser Ile Val Gly Val Leu Ala Gly Ala  
 20 25 30  
 Ser Trp Tyr Gln Arg Glu Ile His Asp Phe Phe Gly Val Arg Phe Val  
 35 40 45  
 Gly Pro Gly Ala Asp Asp Arg Ala Leu Leu Val His Asp Ala Pro Lys  
 50 55 60  
 Pro Pro Leu Arg Lys Glu Ala Val Leu Ala Gln Arg Ala Asp Thr Val  
 65 70 75 80  
 Trp Pro Gly Ala Ala Asp Gln Ala Gly Ser Lys Ser Ala Ser Arg Arg  
 85 90 95  
 Leu Pro Val Gly Val Pro Asp Pro Glu Thr Trp Arg Arg Ile Lys Asp  
 100 105 110  
 Gly Glu Asp Ile Pro Asp Ala Glu Val Ile Ala Ala Met Ser Gly Arg  
 115 120 125  
 Arg Pro Arg Ser Ala Ala Arg Arg Met Ala Ser Thr Ala Ser Gly Arg  
 130 135 140  
 Gln Ala  
 145

<210> 2179

<211> 296

<212> DNA

<213> Homo sapiens

<400> 2179

gtgcacttcc gagtggacgt cgagcgtcgc attaacgggg ccggcgcggt gggcgcacac  
 60  
 aagacgtcga tgctgcagga tctggacngc gaccgcgcga tggagatcga cccgctcgtc  
 120  
 tccgtcgttc aggagatggg acgcctggcc aacgtgccga cgcccacgct cgatgtcgtg  
 180

ctcccactga tcaagcaacg tgaattcatg acgaagccgg atgccgtggc ggccgcgcag  
 240  
 gaacgtctgg ctaaagcggc ataaaccagc cgccgaaacc agcggcataa cgcggg  
 296

<210> 2180  
 <211> 87  
 <212> PRT  
 <213> Homo sapiens

<400> 2180  
 Val His Phe Arg Val Asp Val Glu Arg Arg Ile Asn Gly Ala Gly Ala  
 1 5 10 15  
 Val Gly Ala His Lys Thr Ser Met Leu Gln Asp Leu Asp Xaa Asp Arg  
 20 25 30  
 Ala Met Glu Ile Asp Pro Leu Val Ser Val Val Gln Glu Met Gly Arg  
 35 40 45  
 Leu Ala Asn Val Pro Thr Pro Thr Leu Asp Val Val Leu Pro Leu Ile  
 50 55 60  
 Lys Gln Arg Glu Phe Met Thr Lys Pro Asp Ala Val Ala Ala Ala Gln  
 65 70 75 80  
 Glu Arg Leu Ala Lys Ala Ala  
 85

<210> 2181  
 <211> 387  
 <212> DNA  
 <213> Homo sapiens

<400> 2181  
 ngcgcgccgg gatggatcat agtctggctc gatgcatcac gtgcgcgcac ggcgcgcgtg  
 60  
 tcgattcccg acggcatgat cgcggcactc gaccgtaccg gcaaggcgca aacgcacctc  
 120  
 acgctggcat cgccggaagc ggggtgtcgtc agcgaactga acgtgcgcga cgggtgcgatg  
 180  
 gtcgcgcgccg ggcagacgct cgcgaagatt tcgggcctct cgaagctctg gctgatcgtc  
 240  
 gagattcccg aagcgctcgc gctcgatgcg cgtccgggca tgaccgtcga cgcgacgttc  
 300  
 tcgggcgatc cgacgcagca tttcaccggg cgtatccgcg agatcctgcc gggcatcacc  
 360  
 accagtagcc gcacgcttca ggcgcgc  
 387

<210> 2182  
 <211> 129  
 <212> PRT  
 <213> Homo sapiens

<400> 2182  
 Xaa Ala Pro Gly Trp Ile Ile Val Trp Leu Asp Ala Ser Arg Ala Arg  
 1 5 10 15  
 Met Arg Ala Leu Ser Ile Pro Asp Gly Met Ile Ala Ala Leu Asp Arg

```

<400> 2184
Met Val Thr Leu Xaa Asp Lys Leu Ile Pro Thr Gln Arg Ser Leu Trp
 1              5              10              15
Phe Ser Ser Leu Phe Leu Gly Gln Trp Asn His Thr Ser Leu Lys Ile
      20              25              30
Thr Val Leu Phe Pro Leu Asp Ala Pro Arg Arg Tyr Phe Leu Tyr Leu
      35              40              45
Leu Glu Tyr Pro Leu Glu Pro Lys Val Ser Thr Phe Lys Ser Phe Leu
      50              55              60
Arg Met Phe His Ser Pro Cys Pro Thr Pro Pro Cys Leu Glu Asn Ala
65              70              75              80
Glu Pro Ile His Gln Ser Phe Leu Gly Tyr Gln Thr Val His Lys Phe
      85              90              95
Val Phe Gln Ala

```

100

<210> 2185  
 <211> 723  
 <212> DNA  
 <213> Homo sapiens

<400> 2185  
 ngaatatcca tgcagcagct cgtcgacaat tttgacggtg ccatccctga cgatcttgac  
 60  
 tctcttgtga ccctgcccgg agtcggtcgt aagaccgcca atgttggtttt aggtaatgcc  
 120  
 ttcggcatcc ccggaatcac cccggacacc cacgtcatgc gggatatctcg acgtctgggc  
 180  
 tggaccgatg cgactacccc cgccaagggtg gaaaccgacc tggctgagct ttttgacccc  
 240  
 tctgaatggg tgatgttgtg tcaccgcctc atctggcacg ggcggcggcg ctgtcactcg  
 300  
 cggcgtcctg cctgcgggggt atgcccgggt gccgagtggg gcccgctcctt cggggaaggg  
 360  
 ccaacggatc ccgaggaggc cgccacgtta gtccgggagc cgcgtcgatg agggggatga  
 420  
 acgttttcgg cgcggtgatg gccgccttga tgtttgctgg ctgcggggga gatgcgggca  
 480  
 tagctcatca gcgtgaaaat gccggaatac cggggtgctc gcatttgccg tcggggccga  
 540  
 ttgcgaaaag ttccggggccg gccacagagg gccggcccat gcccgatcac ggcttgcaat  
 600  
 gccttgggtga ggggcccagc atctccatgt ctgcggcgac atcgaggggc gtgaccgtcg  
 660  
 tgacgatctg ggcgtcgtgg tgcgaccat gtcgtagtga ggctccgctc attgcgaacg  
 720  
 cgt  
 723

<210> 2186  
 <211> 136  
 <212> PRT  
 <213> Homo sapiens

<400> 2186  
 Xaa Ile Ser Met Gln Gln Leu Val Asp Asn Phe Asp Gly Ala Ile Pro  
 1 5 10 15  
 Asp Asp Leu Asp Ser Leu Val Thr Leu Pro Gly Val Gly Arg Lys Thr  
 20 25 30  
 Ala Asn Val Val Leu Gly Asn Ala Phe Gly Ile Pro Gly Ile Thr Pro  
 35 40 45  
 Asp Thr His Val Met Arg Val Ser Arg Arg Leu Gly Trp Thr Asp Ala  
 50 55 60  
 Thr Thr Pro Ala Lys Val Glu Thr Asp Leu Ala Glu Leu Phe Asp Pro  
 65 70 75 80  
 Ser Glu Trp Val Met Leu Cys His Arg Leu Ile Trp His Gly Arg Arg  
 85 90 95  
 Arg Cys His Ser Arg Arg Pro Ala Cys Gly Val Cys Pro Val Ala Glu



```

          100          105          110
Trp Cys Pro Ser Phe Gly Glu Gly Pro Thr Asp Pro Glu Glu Ala Ala
          115          120          125
Thr Leu Val Arg Glu Pro Arg Arg
          130          135

```

<210> 2187  
 <211> 342  
 <212> DNA  
 <213> Homo sapiens

```

<400> 2187
nnacgcgtga aggatgcgcc ccggtcgacc ggccatccgt cttgcctcgc aggcattccag
60
cccgccatat gctgcaaccg caacaccgct ttgccgtcgc atggcatctc cactccggat
120
cgcatcgatc cacgaggggt atcggcgcgga aagaagttgc cggggcaaaa tcccggcgag
180
gaaagcccga tggagtggaa gacgtgctc aacgacaccc gcttcggagg ggtcgccagc
240
ctcgatggga cgcgcggacg gtcggagttc cagaaggacc acgaccggat catcttctcc
300
gaagccttcc gcaagctggg ccgcaagacc caggtgcacc cg
342

```

<210> 2188  
 <211> 51  
 <212> PRT  
 <213> Homo sapiens

```

<400> 2188
Met Glu Trp Lys Thr Leu Leu Asn Asp Thr Arg Phe Gly Gly Val Ala
  1          5          10          15
Ser Leu Asp Gly Thr Arg Gly Arg Ser Glu Phe Gln Lys Asp His Asp
          20          25          30
Arg Ile Ile Phe Ser Glu Ala Phe Arg Lys Leu Gly Arg Lys Thr Gln
          35          40          45
Val His Pro
          50

```

<210> 2189  
 <211> 1412  
 <212> DNA  
 <213> Homo sapiens

```

<400> 2189
ntcgcttcat ggtgcgcaat tacgacaacg ccaagtctca gaatgccgag gcttacaccg
60
cgttcttcca cgcgatgcta gatgccgggg tcaacctgcc gccatcgtgc tttgaggcct
120
ggttcctctc ggacgctcac gacgacgaag ctttcgaggt tttccgcgcc gcctgccga
180
gggctgccca ggcggctgcc caggtgatca gtgcctgaca cggggctgac ttcgcaggtc
240

```

atcgaggcaa tctgtgcctg gttcgacgcc aacggacgcg atctgccgtg ggcgcgaccc  
 300  
 ggcacctccg cgtggggcgt gcttgtagc gaggtcatga gccaacagac cccgatgtcc  
 360  
 cgggtgatcg ggccgtggca cgagtggatg aaccgctggc ccacctga tgatttggcg  
 420  
 gaggaggact ctggggaagc ggttgccgcg tgggggcgcc tgggttaccg gcgtcggggc  
 480  
 ttacgcctgc attcctgtgc cgtcacgac gccaccgagc acgacggggg tgtgcccac  
 540  
 agtgacgacg agctcgtgc cctcccggtt attggcgact acaccgcgag cgcagtgcgc  
 600  
 tcttttgcgt ttggcgccg cgccacagt cttgacacca atgtacgtcg cctcatcgt  
 660  
 agagcagagt ctgggatcgc aaactgtcca acctcgggtga cgagggtga gcggttagtc  
 720  
 gccgacgcgt tgggtcccg cgaagacgtc cgagcggcca agtgggcggt ggcgtcgatg  
 780  
 gaattggggg cactggtatg cacggcgcg tctccgcagt gtgaggtctg cccgatccgg  
 840  
 gatggctgca ggtgggtgat cgacggtagg cgggacaatg ccccgggccg tcgaggacag  
 900  
 ccatggaagg gcacggatcg ccagtgccgc ggcgtgatta tggacgtggt gcgcaacagc  
 960  
 cctcacgggg tgaaggtcca gatggctctt tccgcctggc ccgagctcga tcaggcatca  
 1020  
 aggtgcctgg aatccttact cgatgacggt ttagtgcacc gacgaggtaa ccttattagc  
 1080  
 ctgtgacctg agaaattctt ggccccgacc acccaaacag accgagtcca gcagtgatgc  
 1140  
 cgctgggtta tccttagagg cggtcctcaa attggatcag ccaaaccacg tcaccgatca  
 1200  
 agacaccatg agcacaacac ccaaacagcc gcgcacggcg acagctgcc gacgccgaca  
 1260  
 cattgtcgac catctgcgtt ctttggggca ctcggagtcc atcggagatc tttaaccaact  
 1320  
 gttcgggtgc tctacatcga cgattcgccg cgatgtcgat gccctctcgg atgaatccaa  
 1380  
 gatctggaag atttccgggg gagacgtcat ga  
 1412

&lt;210&gt; 2190

&lt;211&gt; 292

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2190

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Val | Pro | Asp | Thr | Gly | Leu | Thr | Ser | Gln | Val | Ile | Glu | Ala | Ile | Cys |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Ala | Trp | Phe | Asp | Ala | Asn | Gly | Arg | Asp | Leu | Pro | Trp | Arg | Arg | Pro | Gly |
|     |     |     | 20  |     |     |     | 25  |     |     |     |     |     | 30  |     |     |
| Thr | Ser | Ala | Trp | Gly | Val | Leu | Val | Ser | Glu | Val | Met | Ser | Gln | Gln | Thr |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Pro | Met | Ser | Arg | Val | Ile | Gly | Pro | Trp | His | Glu | Trp | Met | Asn | Arg | Trp |

```

      50              55              60
Pro Thr Pro Asp Asp Leu Ala Glu Glu Asp Ser Gly Glu Ala Val Ala
65              70              75              80
Ala Trp Gly Arg Leu Gly Tyr Pro Arg Arg Ala Leu Arg Leu His Ser
      85              90              95
Cys Ala Val Thr Ile Ala Thr Glu His Asp Gly Gly Val Pro Asn Ser
      100              105              110
Asp Asp Glu Leu Val Ala Leu Pro Gly Ile Gly Asp Tyr Thr Ala Ser
      115              120              125
Ala Val Val Ser Phe Ala Phe Gly Gly Arg Ala Thr Val Leu Asp Thr
      130              135              140
Asn Val Arg Arg Leu Ile Ala Arg Ala Glu Ser Gly Ile Ala Asn Cys
145              150              155              160
Pro Thr Ser Val Thr Arg Ala Glu Arg Val Val Ala Asp Ala Leu Val
      165              170              175
Pro Asp Glu Asp Val Arg Ala Ala Lys Trp Ala Val Ala Ser Met Glu
      180              185              190
Leu Gly Ala Leu Val Cys Thr Ala Arg Ser Pro Gln Cys Glu Val Cys
      195              200              205
Pro Ile Arg Asp Gly Cys Arg Trp Val Ile Asp Gly Arg Pro Asp Asn
      210              215              220
Ala Pro Ala Arg Arg Gly Gln Pro Trp Lys Gly Thr Asp Arg Gln Cys
225              230              235              240
Arg Gly Val Ile Met Asp Val Val Arg Asn Ser Pro His Gly Val Lys
      245              250              255
Val Gln Met Ala Leu Ser Ala Trp Pro Glu Leu Asp Gln Ala Ser Arg
      260              265              270
Cys Leu Glu Ser Leu Leu Asp Asp Gly Leu Val His Arg Arg Gly Asn
      275              280              285
Leu Ile Ser Leu
      290

```

<210> 2191  
 <211> 502  
 <212> DNA  
 <213> Homo sapiens

```

<400> 2191
nnacgcgtcg agaatctcta ctctgccccg aacaacgtcc ggcttcgtca ggctcacgat
60
gactcccttg acgacgacac catttcggg ggtagccac attggtgctg cctcatggac
120
tacattgaat cccgttcaat cctgaacggc gttcaggacg tctccagtct cggaaggacc
180
agagtattgc tgaatctagc cgacatgacc gaacgcggcc tgagggggga gtccattacc
240
cgcgaggagg ccctcgagat tcttcgcagc agtgatgatg agctcatgtc aatcatcgcc
300
gccgccggaa aagtgcgtcg ccactttttc gataaccggg ttcgcctcaa ctacctggtc
360
aacctcaagt ccggcctgtg tcccgaagac tgctcctatt gctcgcagcg tctgggagcg
420
cgtgccgaga tcacgaaata ctctggggc gatccgcaga aggtacacga cgccgtcgag
480

```

gctgggattg ccggtggtgc ac  
502

<210> 2192  
<211> 104  
<212> PRT  
<213> Homo sapiens

<400> 2192  
Leu Asn Leu Ala Asp Met Thr Glu Arg Gly Leu Arg Gly Glu Ser Ile  
1 5 10 15  
Thr Arg Glu Glu Ala Leu Glu Ile Leu Arg Ser Ser Asp Asp Glu Leu  
20 25 30  
Met Ser Ile Ile Ala Ala Ala Gly Lys Val Arg Arg His Phe Phe Asp  
35 40 45  
Asn Arg Val Arg Leu Asn Tyr Leu Val Asn Leu Lys Ser Gly Leu Cys  
50 55 60  
Pro Glu Asp Cys Ser Tyr Cys Ser Gln Arg Leu Gly Ser Arg Ala Glu  
65 70 75 80  
Ile Thr Lys Tyr Ser Trp Ala Asp Pro Gln Lys Val His Asp Ala Val  
85 90 95  
Glu Ala Gly Ile Ala Gly Gly Ala  
100

<210> 2193  
<211> 321  
<212> DNA  
<213> Homo sapiens

<400> 2193  
ccatggggaa tgcagagcac ggacagtcac acagactgtc ctctctggcc ttctggaccc  
60  
aacatactcc tcttgccaac tgggtattac tggaccttac tgggccttac tggacccaac  
120  
atactcctct tgccaactgg ggatttaaaa attttaaaag cccctttatc tcctccaca  
180  
agtcattgtac tgccaacagg gacacactgt tttctttgga aaccctgctg tgtgcccaga  
240  
cagagggtccc actgccctgg gacagctccc ttgcctanag gggaaggagg gtgtgtgtgc  
300  
tgtgtgtgtt taggttgggg a  
321

<210> 2194  
<211> 106  
<212> PRT  
<213> Homo sapiens

<400> 2194  
Met Gly Asn Ala Glu His Gly Gln Ser His Arg Leu Ser Ser Leu Ala  
1 5 10 15  
Phe Trp Thr Gln His Thr Pro Leu Ala Asn Trp Val Leu Leu Asp Leu  
20 25 30  
Thr Gly Pro Tyr Trp Thr Gln His Thr Pro Leu Ala Asn Trp Gly Phe

```
<210> 2195
<211> 504
<212> DNA
<213> Homo sapiens
```

```
<210> 2196
<211> 168
<212> PRT
<213> Homo sapiens
```

1622

```

          100          105          110
Arg Val Ala Ser Gly Asn Leu Val Thr Ala Arg Pro Ile Gly Val Leu
      115          120          125
Asp Gly Val Asp Phe His His Thr Gly Glu Val Arg Arg Val Asp Arg
      130          135          140
Lys Gly Ile Asn Arg Leu Leu Asp Glu Arg Ser Ile Val Leu Leu Ser
      145          150          155          160
Pro Leu Gly Tyr Ser Pro Thr Gly
          165

```

<210> 2197  
 <211> 351  
 <212> DNA  
 <213> Homo sapiens

```

<400> 2197
acaagtccgt cgacgattcg ctttccggag gcgggcccag gaatggtaat gaaacccgag
60
ttatggggcc ctgcgctcga cgagattgcc gcgggaaaac gtgcgggagg ggctgaacag
120
ttagattccg cagtgcagca catccacggg gctactcacg ataaactgtc cgggtgctgtt
180
ccgaaacgct acgatggctg ggatgtcttg gcaggcgagg acccgaatgc accgttgctg
240
cttgtgccta gcccggctgg tgcagtgttt agtcaaaata aggcacaagc ctggtccaat
300
gaagaccaca ttgtttttgc ctgtgggcgc tatgaaggta ttgatcaacg c
351

```

<210> 2198  
 <211> 117  
 <212> PRT  
 <213> Homo sapiens

```

<400> 2198
Thr Ser Pro Ser Thr Ile Arg Phe Pro Glu Ala Gly Pro Gly Met Val
1      5      10      15
Met Lys Pro Glu Leu Trp Gly Pro Ala Leu Asp Glu Ile Ala Ala Gly
      20      25      30
Lys Arg Ala Gly Gly Ala Glu Gln Leu Asp Ser Ala Val Gln His Ile
      35      40      45
His Gly Ala Thr His Asp Lys Leu Ser Gly Ala Val Pro Lys Arg Tyr
      50      55      60
Asp Gly Arg Asp Val Leu Ala Gly Glu Asp Pro Asn Ala Pro Leu Leu
      65      70      75      80
Leu Val Pro Ser Pro Ala Gly Ala Val Phe Ser Gln Asn Lys Ala Gln
      85      90      95
Ala Trp Ser Asn Glu Asp His Ile Val Phe Ala Cys Gly Arg Tyr Glu
      100     105     110
Gly Ile Asp Gln Arg
      115

```

<210> 2199  
 <211> 457

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2199

agagcgccggc cgccaagatc tgcattcccta ggccacgcta agaccctggg gaagagcgca  
 60  
 ggagcccggg agaagggctg gaaggagggg actggacgtg cggagaattc cccctaaaa  
 120  
 ggcagaagcc cccgccccca cctccgagc tccgttcggg cagagcgctt gcctgcctgc  
 180  
 cgttgctggg ggcgcccacc tcgcccagcc atgccaggcc cggccaccga cgcggggaag  
 240  
 atccctttct gcgacgcaa ggaagaaatc cgtgccgggc tcgaaagctc tgagggcggc  
 300  
 ggcggcccg agaggccagg cgcgcgcggg cagcggcaga acatcgtctg gaggaatgtc  
 360  
 gtccatgatga gcttgetcca cttggggggc gtgtactccc tgggtgctcat ccccaaagcc  
 420  
 aagccactca ctctgctctg gggtaagtcc cgcgggc  
 457

&lt;210&gt; 2200

&lt;211&gt; 152

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2200

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Arg | Arg | Pro | Pro | Arg | Ser | Ala | Ser | Leu | Gly | His | Ala | Lys | Thr | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Gly | Lys | Ser | Ala | Gly | Ala | Arg | Glu | Lys | Gly | Trp | Lys | Glu | Gly | Thr | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Arg | Ala | Glu | Asn | Ser | Pro | Leu | Lys | Gly | Arg | Ser | Pro | Arg | Pro | His | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Pro | Ser | Ser | Val | Arg | Ala | Glu | Arg | Leu | Pro | Ala | Cys | Arg | Cys | Trp | Gly |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Arg | Pro | Pro | Arg | Pro | Ala | Met | Pro | Gly | Pro | Ala | Thr | Asp | Ala | Gly | Lys |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Ile | Pro | Phe | Cys | Asp | Ala | Lys | Glu | Glu | Ile | Arg | Ala | Gly | Leu | Glu | Ser |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Ser | Glu | Gly | Gly | Gly | Gly | Pro | Glu | Arg | Pro | Gly | Ala | Arg | Gly | Gln | Arg |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Gln | Asn | Ile | Val | Trp | Arg | Asn | Val | Val | Leu | Met | Ser | Leu | Leu | His | Leu |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Gly | Ala | Val | Tyr | Ser | Leu | Val | Leu | Ile | Pro | Lys | Ala | Lys | Pro | Leu | Thr |
|     | 130 |     |     |     |     | 135 |     |     |     |     |     | 140 |     |     |     |
| Leu | Leu | Trp | Gly | Lys | Ser | Arg | Arg |     |     |     |     |     |     |     |     |
| 145 |     |     |     |     |     | 150 |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 2201

&lt;211&gt; 336

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2201

agtactgcga tggacagcta tgtcgtggat ggtggtcgca aattacatgt ttgtggtaac  
 60  
 aaccctgatt gcgatggta tgaagtcgaa gaaggcgaat tcaagatcaa gggttatgat  
 120  
 ggtccgacta tcccatgcga taaatgtgat ggtgagatgc agcttaaaac gggtcgtttt  
 180  
 ggtccatatt tcgcatgtac tagctgtgac aatactcgta aggtactcaa gagtgggtcaa  
 240  
 cctgctccgc cacgtgtaga cccaatcaaa atggagcatc tacgttcaac gaagcatgat  
 300  
 gatttcttcg tcttacgtga gggcgtgct ggttta  
 336

<210> 2202  
 <211> 112  
 <212> PRT  
 <213> Homo sapiens

<400> 2202  
 Ser Thr Ala Met Asp Ser Tyr Val Val Asp Gly Gly Arg Lys Leu His  
 1 5 10 15  
 Val Cys Gly Asn Asn Pro Asp Cys Asp Gly Tyr Glu Val Glu Glu Gly  
 20 25 30  
 Glu Phe Lys Ile Lys Gly Tyr Asp Gly Pro Thr Ile Pro Cys Asp Lys  
 35 40 45  
 Cys Asp Gly Glu Met Gln Leu Lys Thr Gly Arg Phe Gly Pro Tyr Phe  
 50 55 60  
 Ala Cys Thr Ser Cys Asp Asn Thr Arg Lys Val Leu Lys Ser Gly Gln  
 65 70 75 80  
 Pro Ala Pro Pro Arg Val Asp Pro Ile Lys Met Glu His Leu Arg Ser  
 85 90 95  
 Thr Lys His Asp Asp Phe Phe Val Leu Arg Glu Gly Ala Ala Gly Leu  
 100 105 110

<210> 2203  
 <211> 273  
 <212> DNA  
 <213> Homo sapiens

<400> 2203  
 ctcgagagat gcagtcacag ccgggggtggg aagctgtgca gacagccccg gatctgggac  
 60  
 gtgatggaaa actcaacaga ctggttcaga tcttggcccc gagcccagag gcaccgggga  
 120  
 cccccagggc tggttctccc tggccacacc agtaccacac ttccaaatgc cctgtaggtg  
 180  
 accaccaggc cacacaggcc cgtctgaggg gccacaggct gtgcaccatg ggacgcaggc  
 240  
 ctgtccctgc ctccctccga tgctctgatg gtg  
 273

<210> 2204  
 <211> 88  
 <212> PRT



<213> Homo sapiens

<400> 2204

```

Met Gln Ser Gln Pro Gly Trp Glu Ala Val Gln Thr Ala Pro Asp Leu
 1             5             10             15
Gly Arg Asp Gly Lys Leu Asn Arg Leu Val Gln Ile Leu Ala Arg Ser
             20             25             30
Pro Glu Ala Pro Gly Thr Pro Arg Ala Val Ser Pro Trp Pro His Gln
             35             40             45
Tyr Pro Thr Ser Lys Cys Pro Val Gly Asp His Gln Ala Thr Gln Ala
             50             55             60
Arg Leu Arg Gly His Arg Leu Cys Thr Met Gly Arg Arg Pro Val Pro
65             70             75             80
Ala Ser Leu Arg Cys Pro Asp Gly
                        85

```

<210> 2205

<211> 387

<212> DNA

<213> Homo sapiens

<400> 2205

```

gnnnnnggng nnnnactggg gtgcatgggt aaaatcctgc aagctactgg gttgccacag
60
catctgtccc actttgtggt ctgcaaatac agcttctggg atcaacagga gccggtgatt
120
gtcgtctcctg aagtggacac ctctctctct tccgtcagca aggagccgca ctgcatgggt
180
gtctttgatc attgcaatga gttttctggt aacatcaccc aagactttat cgagcatctt
240
tccgaaggag cattggcaat tgaagtatat ggacataaaa taaacgatcc ccggaaaaac
300
cccgccctgt gggatttggg aatcatccaa gcaaagacac gtagtcttcg ggacagatgg
360
agtgaagtgc ccaggaaatt ggaattc
387

```

<210> 2206

<211> 129

<212> PRT

<213> Homo sapiens

<400> 2206

```

Xaa Xaa Gly Xaa Xaa Leu Val Cys Met Val Lys Ile Leu Gln Ala Thr
 1             5             10             15
Gly Leu Pro Gln His Leu Ser His Phe Val Phe Cys Lys Tyr Ser Phe
             20             25             30
Trp Asp Gln Gln Glu Pro Val Ile Val Ala Pro Glu Val Asp Thr Ser
             35             40             45
Ser Ser Ser Val Ser Lys Glu Pro His Cys Met Val Val Phe Asp His
             50             55             60
Cys Asn Glu Phe Ser Val Asn Ile Thr Glu Asp Phe Ile Glu His Leu
65             70             75             80
Ser Glu Gly Ala Leu Ala Ile Glu Val Tyr Gly His Lys Ile Asn Asp

```

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |  |  |  |  |
| Pro | Arg | Lys | Asn | Pro | Ala | Leu | Trp | Asp | Leu | Gly | Ile | Ile | Gln | Ala | Lys |  |  |  |  |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |  |  |  |  |
| Thr | Arg | Ser | Leu | Arg | Asp | Arg | Trp | Ser | Glu | Val | Pro | Arg | Lys | Leu | Glu |  |  |  |  |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     |     | 125 |     |     |  |  |  |  |
| Phe |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |

<210> 2207  
 <211> 667  
 <212> DNA  
 <213> Homo sapiens

<400> 2207  
 atctccaacc ccgagaccct ctccaatata gccggcttcg agggctacat cgacctgggc  
 60  
 cgcgagctct ccagcctgca ctcaactgctc tgggaggccg tcagccagct ggagcagagc  
 120  
 atagatatcca aactgggacc cctgcctcgg atcctgaggg acgtccacac agcactgagc  
 180  
 accccaggta gcgggcagct ccaggggacc aatgacctgg cctccacacc gggctctggc  
 240  
 agcagcagca tctcagctgg gctgcagaag atggtgattg agaacgatct ttccggctctg  
 300  
 atagatttca cccggttacc gtctccaacc cccgaaaaca aggacttggt ttttgtcaca  
 360  
 aggtctctccg ggggtccagcc ctcaactgcc cgcagctcga gttactcgga agccaacgag  
 420  
 cctgatcttc agatggccaa cgggtggcaag agcctctcca tgggtggacct ccaggacgcc  
 480  
 cgacagctgg atggggaggc aggtctcccg gcggggcccc acgtctctcc cacagatggg  
 540  
 caggccgctg cagctcagct ggtggccggg tggccggccc gggcaacccc agtgaacctg  
 600  
 gcagggtggt ccacggtgct gcgggcaggc cagacaccaa ccacaccagg cacctccgag  
 660  
 ggcgcgc  
 667

<210> 2208  
 <211> 222  
 <212> PRT  
 <213> Homo sapiens

<400> 2208  
 Ile Ser Asn Pro Glu Thr Leu Ser Asn Thr Ala Gly Phe Glu Gly Tyr  
 1 5 10 15  
 Ile Asp Leu Gly Arg Glu Leu Ser Ser Leu His Ser Leu Leu Trp Glu  
 20 25 30  
 Ala Val Ser Gln Leu Glu Gln Ser Ile Val Ser Lys Leu Gly Pro Leu  
 35 40 45  
 Pro Arg Ile Leu Arg Asp Val His Thr Ala Leu Ser Thr Pro Gly Ser  
 50 55 60  
 Gly Gln Leu Pro Gly Thr Asn Asp Leu Ala Ser Thr Pro Gly Ser Gly

```

65              70              75              80
Ser Ser Ser Ile Ser Ala Gly Leu Gln Lys Met Val Ile Glu Asn Asp
      85              90              95
Leu Ser Gly Leu Ile Asp Phe Thr Arg Leu Pro Ser Pro Thr Pro Glu
      100             105             110
Asn Lys Asp Leu Phe Phe Val Thr Arg Ser Ser Gly Val Gln Pro Ser
      115             120             125
Pro Ala Arg Ser Ser Ser Tyr Ser Glu Ala Asn Glu Pro Asp Leu Gln
      130             135             140
Met Ala Asn Gly Gly Lys Ser Leu Ser Met Val Asp Leu Gln Asp Ala
145             150             155             160
Arg Thr Leu Asp Gly Glu Ala Gly Ser Pro Ala Gly Pro Asp Val Leu
      165             170             175
Pro Thr Asp Gly Gln Ala Ala Ala Ala Gln Leu Val Ala Gly Trp Pro
      180             185             190
Ala Arg Ala Thr Pro Val Asn Leu Ala Gly Leu Ala Thr Val Arg Arg
      195             200             205
Ala Gly Gln Thr Pro Thr Thr Pro Gly Thr Ser Glu Gly Ala
      210             215             220

```

&lt;210&gt; 2209

&lt;211&gt; 353

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2209

```

ngggaagtgtg gtactagcct cccaaagcca ctctcctgag tgacattgag agcatcctat
60
agagaaggcc atgagagaga tagcactggg acagatgggtg tcagcagagg ggactccaga
120
ccacagcaga agtgaccaag ctgtagcttc cttagatggc cccaagggtg ggaggcttca
180
cacagcagag cctgggtctg gaggcacctt ggggatgttt ttccccatta ggcccctgag
240
ctctatggaa gcacttaact gcctgttccc cgttattct gtgtttaaac caaggaaaca
300
acatgcctgg ggtctgaaat cctggattca aatcctgact gtgttgtgtg ctt
353

```

&lt;210&gt; 2210

&lt;211&gt; 94

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2210

```

Met Arg Glu Ile Ala Leu Gly Gln Met Val Ser Ala Glu Gly Thr Pro
 1              5              10              15
Asp His Ser Arg Ser Asp Gln Ala Val Ala Ser Leu Asp Gly Pro Lys
      20              25              30
Gly Gly Arg Leu His Thr Ala Glu Pro Gly Ser Gly Gly Thr Leu Gly
      35              40              45
Met Phe Phe Pro Ile Arg Pro Leu Ser Ser Met Glu Ala Leu Asn Cys
      50              55              60
Leu Phe Pro Ala Tyr Ser Val Phe Lys Pro Arg Lys Gln His Ala Trp

```

1629

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2213

acgcgtccga cggcagttc cggcagctgc gggaaagctg cgatgcgctc gccgagcatt  
 60  
 gccggtgctt cgacacactg gggtatatcg ccctcaaagc acaggtctac gaaggttctg  
 120  
 acggaaggcc cggccaatcc gatcgcggcc tcggcgctgc gcatcatccg ggcgcgcgtg  
 180  
 tcgcagctct ggggcacgtc gctgctccgc aacggacggg cggaacagag tgtggtggag  
 240  
 atcgcccggg ttggtcgacg gatcacgtca cgggacgagg aagccgcca gcgtgcactg  
 300  
 ctcgaccaca atcgacgcgc gttggaa  
 327

&lt;210&gt; 2214

&lt;211&gt; 95

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2214

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Arg | Ser | Pro | Ser | Ile | Ala | Gly | Ala | Ser | Thr | His | Trp | Val | Ile | Ser |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Pro | Ser | Lys | His | Arg | Ser | Thr | Lys | Val | Leu | Thr | Glu | Gly | Pro | Ala | Asn |
|     |     |     | 20  |     |     |     | 25  |     |     |     |     | 30  |     |     |     |
| Pro | Ile | Ala | Ala | Ser | Ala | Leu | Arg | Ile | Ile | Arg | Ala | Arg | Val | Ser | Gln |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Leu | Trp | Gly | Thr | Ser | Leu | Leu | Arg | Asn | Gly | Arg | Ala | Glu | Gln | Ser | Val |
|     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |
| Val | Glu | Ile | Ala | Arg | Leu | Val | Asp | Ala | Ile | Thr | Ser | Arg | Asp | Glu | Glu |
| 65  |     |     |     | 70  |     |     |     | 75  |     |     |     |     |     | 80  |     |
| Ala | Ala | Gln | Arg | Ala | Leu | Leu | Asp | His | Asn | Arg | Ser | Ala | Leu | Glu |     |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |

&lt;210&gt; 2215

&lt;211&gt; 430

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2215

ctggggatca tgccctacat cactgcgtcg atcatcctgc agctgctgac agtcgtgatc  
 60  
 ccgaagctgg aaacccttaa gaaggagggc gcgtccggtc agaacaagat caccagtag  
 120  
 acccggtacc tcactctcgt gcttggcctg ttgcaggcaa cggccttcgt cacgcttgcc  
 180  
 acctccggcc gtctattcac cnntgcagct ntgccagtcg tctactccac ctcggtcttc  
 240  
 gaagtcgtcg tcatgatcct gactatgacg gccggtacga ccatcgatcat gtggatgggt  
 300  
 gagtcacatca ccgaccgagg tatcggaac ggtatgtcga tcatgatttt cactcagatt  
 360

gcggcgcggtt tccctgactc gctgtggtct atcaaggctc ctcgaaatgg cgccgggtcag  
420

gctcacgcgt  
430

<210> 2216  
<211> 143  
<212> PRT  
<213> Homo sapiens

<400> 2216  
Leu Gly Ile Met Pro Tyr Ile Thr Ala Ser Ile Ile Leu Gln Leu Leu  
1 5 10 15  
Thr Val Val Ile Pro Lys Leu Glu Thr Leu Lys Lys Glu Gly Ala Ser  
20 25 30  
Gly Gln Asn Lys Ile Thr Gln Tyr Thr Arg Tyr Leu Thr Leu Val Leu  
35 40 45  
Gly Leu Leu Gln Ala Thr Ala Phe Val Thr Leu Ala Thr Ser Gly Arg  
50 55 60  
Leu Phe Thr Xaa Ala Ala Xaa Pro Val Val Tyr Ser Thr Ser Val Phe  
65 70 75 80  
Glu Val Val Val Met Ile Leu Thr Met Thr Ala Gly Thr Thr Ile Val  
85 90 95  
Met Trp Met Gly Glu Leu Ile Thr Asp Arg Gly Ile Gly Asn Gly Met  
100 105 110  
Ser Ile Met Ile Phe Thr Gln Ile Ala Ala Arg Phe Pro Asp Ser Leu  
115 120 125  
Trp Ser Ile Lys Val Ala Arg Asn Gly Ala Gly Gln Ala His Ala  
130 135 140

<210> 2217  
<211> 444  
<212> DNA  
<213> Homo sapiens

<400> 2217  
accagggccg ctctgaagga cctctctcca gctatcgtga cgacgacggc gaagcggggt  
60  
atgacgtggc tcgatgacga cgtgggccc gacctgttga atcaggctga ttccatggac  
120  
catgccctgg aggccaccgt cccaggctcg gtcaccacgc cggacgccc agtcatccag  
180  
acctgtgccg tggtgcgtga ccttgctcgc gtggcagtc gccagctggg ccgaaatgac  
240  
gaggactcta gggaaccagt cgatgcggag agagtacagg ctcaagcgnc gatgcgggag  
300  
gttttcgaga ccgccgaacg catggtgggg ctggccgccc ccgacgtggt gtgggtctct  
360  
gagtctgaga agggataccg cagcattcac gtcgctccgc tgagtgttgg cggcttgcta  
420  
cgagagaatg tctttgctca gtcc  
444

<210> 2218

<211> 148  
 <212> PRT  
 <213> Homo sapiens

<400> 2218  
 Thr Arg Ala Ala Ser Lys Asp Leu Ser Pro Ala Ile Val Thr Thr Thr  
 1 5 10 15  
 Ala Lys Arg Ala Met Thr Trp Leu Asp Asp Val Gly Ala Asp Leu  
 20 25 30  
 Leu Asn Gln Ala Asp Ser Met Asp His Ala Leu Glu Ala Thr Val Pro  
 35 40 45  
 Gly Arg Val Thr Thr Pro Asp Ala Gln Val Ile Gln Thr Cys Ala Val  
 50 55 60  
 Leu Arg Asp Leu Ala Arg Val Ala Val Ser Gln Leu Gly Arg Asn Asp  
 65 70 75 80  
 Glu Asp Ser Arg Glu Pro Val Asp Ala Glu Arg Val Gln Ala Gln Ala  
 85 90 95  
 Xaa Met Arg Glu Val Phe Glu Thr Ala Glu Arg Met Val Gly Leu Ala  
 100 105 110  
 Ala Ala Asp Val Val Trp Val Ser Glu Ser Glu Lys Gly Tyr Arg Ser  
 115 120 125  
 Ile His Val Ala Pro Leu Ser Val Gly Gly Leu Leu Arg Glu Asn Val  
 130 135 140  
 Phe Ala Gln Ser  
 145

<210> 2219  
 <211> 688  
 <212> DNA  
 <213> Homo sapiens

<400> 2219  
 acgcgtaccg tcgttggcat gagcgtcctg ccactggaaa ttgggtgtc attcagctac  
 60  
 ggcatcaccg atatggcgtg gatgtggcta tgggtcgacg agcccgaaa ccgttgggag  
 120  
 tggtcgatcc ttttccccgc tgggtggctg accagcgctt tggtcagtca ggggttcggt  
 180  
 ggaatgttcc atagtgtgca gattgcgcgt catgtcagca gttaccacgg catcatggtc  
 240  
 gctttcgcgc tcgttgggta cggatggctt gcgatgcaca acttgcgta ccctgatgag  
 300  
 cgctattcga ttcgctcggc cttgataatc ggcacggca tccagttcac ctgggaggca  
 360  
 gtgctgatga tctcgggtat caggccggtg acatggcgcc cgcttggtat cgattctctc  
 420  
 atcgagacga atctcggcgc tccgttcattg ttgctcattg tgaaagcttg gcgcgcgcca  
 480  
 cccgaaggaa ttcttggctc taccagtcgg cgcccgaccg cccgtggcac agcgcgagtc  
 540  
 tatatgaggg atgatcttgt ttctcgacgc cttctacagc gtccttgaga gcctctgcga  
 600  
 gcgaaggcgc cgggtgtagg tctccccggg gctcggtgtg gtccctctctc tgcgtgacgc  
 660

agagccgtgt gatgaggcga agtcatga  
688

<210> 2220  
<211> 189  
<212> PRT  
<213> Homo sapiens

<400> 2220  
Met Ser Val Leu Pro Leu Glu Ile Trp Leu Ser Phe Ser Tyr Gly Ile  
1 5 10 15  
Thr Asn Met Ala Trp Met Trp Leu Trp Phe Asp Glu Pro Gly Asn Arg  
20 25 30  
Trp Glu Trp Ser Ile Leu Phe Pro Ala Gly Trp Leu Thr Ser Ala Leu  
35 40 45  
Val Ser Gln Gly Phe Gly Gly Met Phe His Ser Val Gln Ile Ala Arg  
50 55 60  
His Val Ser Ser Tyr His Gly Ile Met Val Ala Phe Ala Leu Val Gly  
65 70 75 80  
Tyr Gly Trp Leu Ala Met His Asn Leu Arg His Pro Asp Glu Arg Tyr  
85 90 95  
Ser Ile Arg Ser Ala Leu Ile Ile Gly Ile Gly Ile Gln Phe Thr Trp  
100 105 110  
Glu Ala Val Leu Met Ile Ser Gly Ile Arg Pro Leu Thr Trp Arg Pro  
115 120 125  
Leu Val Ile Asp Ser Leu Ile Glu Thr Asn Leu Gly Ala Pro Phe Met  
130 135 140  
Leu Leu Ile Val Lys Ala Trp Arg Ala Pro Pro Glu Gly Ile Pro Gly  
145 150 155 160  
Ser Thr Ser Pro Arg Pro Thr Ala Arg Gly Thr Ala Arg Val Tyr Met  
165 170 175  
Arg Asp Asp Leu Val Ser Arg Arg Leu Leu Gln Arg Pro  
180 185

<210> 2221  
<211> 530  
<212> DNA  
<213> Homo sapiens

<400> 2221  
actagtgtag ctgcaatata tactcgggat ttactacagt taagccttat ccttcacccc  
60  
aaagaagagc aaaccgccat cgctaacgtc ctttcgcaca tggacaccga actcgacgcc  
120  
ctacaacaac gcctcagtaa aaccaaacc atcaagcaag gcatgatgca agaactactc  
180  
acagggaaaa cgaggttggt atgagccaca aggtgaattt agtgcattgag ctggataage  
240  
gtattatctc ggtaaatacg ttattgtcac agcctgagct tgctattccg gcttatcagc  
300  
ggccttataa atggtcacaa gagaacctaa atgcgctgat gagtgattta cgaatttatc  
360  
gtaacaaatc ggcttatcgg ctggggacgg tgggtttttca ttatcataat gaaccgtag  
420



acaacgagaa tacccacaag ctggatattg tagacgggtca gcaacgtacc ttaaccttgt  
 480  
 tgctgctagt caaagccatt ttagaagaac ggttgctctgc gttaacgcgt  
 530

<210> 2222  
 <211> 67  
 <212> PRT  
 <213> Homo sapiens

<400> 2222  
 Thr Ser Val Ala Ala Ile Tyr Thr Arg Asp Leu Leu Gln Leu Ser Leu  
 1 5 10 15  
 Ile Leu Pro Pro Lys Glu Glu Gln Thr Ala Ile Ala Asn Val Leu Ser  
 20 25 30  
 Asp Met Asp Thr Glu Leu Asp Ala Leu Gln Gln Arg Leu Ser Lys Thr  
 35 40 45  
 Lys Thr Ile Lys Gln Gly Met Met Gln Glu Leu Leu Thr Gly Lys Thr  
 50 55 60  
 Arg Leu Val  
 65

<210> 2223  
 <211> 482  
 <212> DNA  
 <213> Homo sapiens

<400> 2223  
 cggccgcgcg ggtagtgagc cctgcgtcgg tggcgtaatg gaaaatgctg cgctgggttg  
 60  
 acaggcgcca gacattgttg tggacgatgc cgctgtcgat cgggtggcacg ccggtgaaga  
 120  
 tgcatttatc caacggccgg gacagggccg gcagttcaca gtccagtttg taaagcgctg  
 180  
 cgcgtcctgc gctgatatag gcctggagat gccccatggc gtgtcgggca acctcgtagt  
 240  
 tcaggccgtc gagcaccaca aggatgacgt tgtgcttcat aaggggagac gctccgcaac  
 300  
 gataggcttg actcatttca cttgaggaac ggggtcaaaa ctgtggggcg gggcaagccc  
 360  
 gctccacac aagcccgctg ccacattgga tctccaatgt gggctacagc cttactgcat  
 420  
 attgatgatg acttcttctt gccacttctg cggcagtgcc ttggaggtct tttccacgc  
 480  
 gt  
 482

<210> 2224  
 <211> 105  
 <212> PRT  
 <213> Homo sapiens

<400> 2224  
 Met Ser Gln Ala Tyr Arg Cys Gly Ala Ser Pro Leu Met Lys His Asn

|   |     |    |    |
|---|-----|----|----|
| 1   | 5   | 10 | 15 |
| Val Ile Leu Val Val Leu Asp Gly Leu Asn Tyr Glu Val Ala Arg His |     |    |    |
| 20  | 25  | 30 |    |
| Ala Met Gly His Leu Gln Ala Tyr Ile Ser Ala Gly Arg Ala Ala Leu |     |    |    |
| 35  | 40  | 45 |    |
| Tyr Lys Leu Asp Cys Glu Leu Pro Ala Leu Ser Arg Pro Leu Asp Lys |     |    |    |
| 50  | 55  | 60 |    |
| Cys Ile Phe Thr Gly Val Pro Pro Ile Asp Ser Gly Ile Val His Asn |     |    |    |
| 65  | 70  | 75 | 80 |
| Asn Val Ser Arg Leu Ser Asn Gln Arg Ser Ile Phe His Tyr Ala Thr |     |    |    |
| 85  | 90  | 95 |    |
| Asp Ala Gly Leu Thr Thr Ala Ala Ala                             |     |    |    |
| 100   | 105 |    |    |

<210> 2225  
 <211> 753  
 <212> DNA  
 <213> Homo sapiens

<400> 2225  
 nacgcgtctg atccacacgg gccactgacg tggcggttatg acagggagcg ggccggtgcc  
 60  
 ggcgtcatcc tcgatctcat gggtcacgga gaggatctcg tccagtatct actcaaaggg  
 120  
 cgattcactg aggtgtccgc cgtgtccgag acgttcatcc gtcagcgtcc caagccactc  
 180  
 aaggagggca tcggccacac aggttgggtc gtctcggacg agctcgggccc ggtgggcaac  
 240  
 gaggattatt gcgctgtcat cgcccgtatg gaaaacggag tgatgtgcac cctggagtcc  
 300  
 agtcgggtca gtgttgggcc gcgcgcggag tacatcgtcg agatctatgg aaccgacgga  
 360  
 tcaatccggt ggaacttcga ggatctcaac catttgcagg tctgtctggg gcgaaacaat  
 420  
 cgtgccctgc agggatatgt caactgcatg gccggaccag acttcccgga gttcatgcgt  
 480  
 ttccaaccgg gagccggaac atccatgggc tttgacgaca tgaaggctgt tgaggctgcy  
 540  
 aaattcgtcc gaggggtctt ggatgggcag caatatggcc catctgtcgc cgatgggttg  
 600  
 gcctcagcgg aggtcaacga tgcgatcgtt gcctcctgcy ggggaccatg cctggcatga  
 660  
 cgtgaagccg gtttcgggga gaaccacgtt cgataagtga ccgcgtcatc gcgtgtctgt  
 720  
 gaccaggcct ggccggcaca ccaggtcgcc ggc  
 753

<210> 2226  
 <211> 219  
 <212> PRT  
 <213> Homo sapiens

<400> 2226  
 Xaa Ala Ser Asp Pro His Gly Pro Leu Thr Trp Arg Tyr Asp Arg Glu

```

      1           5           10           15
Arg Ala Gly Ala Gly Val Ile Leu Asp Leu Met Gly His Gly Glu Asp
      20           25           30
Leu Val Gln Tyr Leu Leu Lys Gly Arg Phe Thr Glu Val Ser Ala Val
      35           40           45
Ser Glu Thr Phe Ile Arg Gln Arg Pro Lys Pro Leu Lys Glu Gly Ile
      50           55           60
Gly His Thr Gly Trp Val Val Ser Asp Glu Leu Gly Pro Val Gly Asn
      65           70           75           80
Glu Asp Tyr Cys Ala Val Ile Ala Arg Met Glu Asn Gly Val Met Cys
      85           90           95
Thr Leu Glu Ser Ser Arg Val Ser Val Gly Pro Arg Ala Glu Tyr Ile
      100          105          110
Val Glu Ile Tyr Gly Thr Asp Gly Ser Ile Arg Trp Asn Phe Glu Asp
      115          120          125
Leu Asn His Leu Gln Val Cys Leu Gly Arg Asn Asn Arg Ala Leu Gln
      130          135          140
Gly Tyr Val Asn Cys Met Ala Gly Pro Asp Phe Pro Glu Phe Met Arg
      145          150          155          160
Phe Gln Pro Gly Ala Gly Thr Ser Met Gly Phe Asp Asp Met Lys Val
      165          170          175
Val Glu Ala Ala Lys Phe Val Arg Gly Val Leu Asp Gly Gln Gln Tyr
      180          185          190
Gly Pro Ser Val Ala Asp Gly Trp Ala Ser Ala Glu Val Asn Asp Ala
      195          200          205
Ile Val Ala Ser Cys Gly Gly Pro Cys Leu Ala
      210          215

```

&lt;210&gt; 2227

&lt;211&gt; 324

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2227

```

ggatccgaaa cggtgggagc ataaagcagc atggcgccacc tactgaagac ggtggtggct
60
ggctgttcat gtcctttcct tagcaacttg gggctcctcta aggttctacc tgggaagaga
120
gactttgtac gaacgcttcg tactcaccag gcaactgtgt gtaaattccc ggtaaagcca
180
ggaattccat ataagcagtt gacagttggg gtccccaagg agattttcca aaacgagaag
240
cgagttgcat tgtctcctgc ggggggtccag gccctgggtca agcagggctt caatgttgtc
300
gtggaatcag gcgcaggcga agct
324

```

&lt;210&gt; 2228

&lt;211&gt; 98

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2228

Met Ala His Leu Leu Lys Thr Val Val Ala Gly Cys Ser Cys Pro Phe

```

      1             5             10             15
Leu Ser Asn Leu Gly Ser Ser Lys Val Leu Pro Gly Lys Arg Asp Phe
      20             25             30
Val Arg Thr Leu Arg Thr His Gln Ala Leu Trp Cys Lys Ser Pro Val
      35             40             45
Lys Pro Gly Ile Pro Tyr Lys Gln Leu Thr Val Gly Val Pro Lys Glu
      50             55             60
Ile Phe Gln Asn Glu Lys Arg Val Ala Leu Ser Pro Ala Gly Val Gln
      65             70             75             80
Ala Leu Val Lys Gln Gly Phe Asn Val Val Val Glu Ser Gly Ala Gly
      85             90             95
Glu Ala

```

<210> 2229  
 <211> 320  
 <212> DNA  
 <213> Homo sapiens

```

<400> 2229
acgcgtgaag gggccctgtg acgaggtcat ttctgtccat ggggggtcca gatggtgagg
60
cccacagaga ggggaacgggc gggggggaggg gaggagagaa gacagactca ggcagaaccc
120
tagctcagcc ccttctctgcg tgcttgggccc tgggaggatg ccatccccag tcccctcttc
180
tgggccctgc tctggggact cggcacagat ggatccagtg catcctcagc cccctgagaa
240
gctgtgctgc catcagctcc ttctctgggt acagggcacg ggaagcggct gccagcagg
300
cctcgggtccc gccaagctgt
320

```

<210> 2230  
 <211> 94  
 <212> PRT  
 <213> Homo sapiens

```

<400> 2230
Met Gly Gly Pro Asp Gly Glu Ala His Arg Glu Gly Thr Gly Gly Gly
  1             5             10             15
Arg Gly Gly Glu Lys Thr Asp Ser Gly Arg Thr Leu Ala Gln Pro Leu
      20             25             30
Pro Ala Cys Leu Ala Leu Gly Gly Cys His Pro Gln Ser Pro Leu Leu
      35             40             45
Gly Pro Ala Leu Gly Thr Arg His Arg Trp Ile Gln Cys Ile Leu Ser
      50             55             60
Pro Leu Arg Ser Cys Ala Ala Ile Ser Ser Phe Ser Gly Tyr Arg Ala
      65             70             75             80
Arg Glu Ala Ala Ala Gln Gln Ala Ser Val Pro Pro Ser Cys
      85             90

```

<210> 2231  
 <211> 671

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2231

```

gggctgtcta ccacgggctt cgggacttgg ggcagcttcc tgagctctct gagctgcagt
60
tccttcaacc acaaaatgag gagagtgcag gacctcagag gcttactgtg aggatggaga
120
aaagcccagt tcaatgcccc actgggaaat gcttcccatt aattgtggaa ttgtcgtgcc
180
catttactgt cggggtgaca ggggggggtg gggtcagagt agagacagga gaaggaagtg
240
agcatttgtg ggatacccac cacgtgccag ggactgaacc ctatctggat ctctgcagc
300
cctcccaatg gcactgtgaa gccagtgttg ttttacagat gaggaaactg agatttgttg
360
ctataacaga taaacagatg accctgaatg gggcagggtca tgtcatctgc catagataca
420
tgcatagaac aatgcaaacc agtcagtccc ctctgagtca gaccaggctg accatcaggg
480
acatgcagac actggcaggg ctgggggttg tccccatcgg tgatagcctg gtgcccccat
540
ggccccctgat gccacggct gtctggaagg ctgggtcact gctgagaaga caaggagaca
600
ttttctctca ccagctttct ttttctatt ccttcttaga cacctgagct gcggtgatca
660
cagctcttaa g
671

```

&lt;210&gt; 2232

&lt;211&gt; 177

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2232

```

Met Glu Lys Ser Pro Val Gln Cys Pro Thr Gly Lys Cys Phe Pro Leu
1      5      10      15
Ile Val Glu Leu Ser Cys Pro Phe Thr Val Gly Val Thr Gly Gly Val
20     25     30
Gly Val Arg Val Glu Thr Gly Glu Gly Ser Glu His Leu Trp Asp Thr
35     40     45
His His Val Pro Gly Thr Glu Pro Tyr Leu Asp Leu Leu Gln Pro Ser
50     55     60
Gln Trp His Cys Glu Ala Ser Val Val Leu Gln Met Arg Lys Leu Arg
65     70     75     80
Phe Val Ala Ile Thr Asp Lys Gln Met Thr Leu Asn Gly Ala Gly His
85     90     95
Val Ile Cys His Arg Tyr Met His Arg Thr Met Gln Thr Ser Gln Ser
100    105    110
Pro Leu Ser Gln Thr Arg Leu Thr Ile Arg Asp Met Gln Thr Leu Ala
115    120    125
Gly Leu Gly Leu Phe Pro Ile Gly Asp Ser Leu Val Pro Pro Trp Pro
130    135    140
Leu Met Pro Thr Ala Val Trp Lys Ala Gly Ser Leu Leu Arg Arg Gln

```

145                                      150                                      155                                      160  
 Gly Asp Ile Phe Ser His Gln Leu Ser Phe Phe Tyr Ser Phe Leu Asp  
    165                                      170                                      175  
 Thr

<210> 2233

<211> 6199

<212> DNA

<213> Homo sapiens

<400> 2233

acgcgtgatg atcgggaatg tgaaaatcag ctggttctgc tgcttggttt caacaccttt  
 60  
 gatttcatta aagtgttgcg gcagcacagg atgatgattt tatactgtac cttgctggcc  
 120  
 agtgcacaaa gtgaagctga aaaggaaagg attatgggaa agatggaagc tgaccagag  
 180  
 ctatccaagt tcctctacca gcttcataaa accgagaagg aggatctgat ccgagaggaa  
 240  
 aggtcccggg gagagcgagt gcgtcagctc cgaatggaca cagatctgga aacctggat  
 300  
 ctcgaccagg gtggagaggc actggctcca cggcagggtc tggacttgga ggacctggt  
 360  
 tttacccaag ggagccactt tatggccaat aaacgctgtc agcttcctga tggatcctcc  
 420  
 cgtcgccagc gtaagggcta tgaagagggt catgtgcctg ctttgaagcc caagcccttt  
 480  
 ggctcagaag aacaattgct cccgggtggaa aagctgcaa agtatgcca ggctgggttt  
 540  
 gagggcttca aaacgctgaa ccggatccag agtaagctct accgtgctgc ccttgagacg  
 600  
 gatgagaatc tgctgctgtg tgctcctact ggtgctggga agaccaacgt ggccctgatg  
 660  
 tgcattgctc gagagattgg gaaacacata aacatggacg gcacaatcaa tgtggatgac  
 720  
 ttcaagatta tctacatagc tcccatgcgc tccctgggtc aggagatggt gggcagcttt  
 780  
 ggaaagcgcc tggccacata tggcatcact gttgctgagc tgactgggga tcaccagcta  
 840  
 tgcaaggagg aaatcagtgc cacacagatt atcgtctgca cccctgagaa gtgggacatc  
 900  
 atcacacgca agggcgggga gcgcacctac acccagctgg tgcgactcat tgtcttggat  
 960  
 gagatccatc ttctacatga tgacagaggc cctgtcttag aagctttggt ggccagggcc  
 1020  
 atccgaaaca ttgagatgac ccaagaagat gtccgactca ttggtctcag tgctaccctc  
 1080  
 cccaactatg aagatgtggc cacctttctg cgagtcgacc ctgctaaggg cctcttctac  
 1140  
 tttgataaca gcttccgccc cgtgcctctg gaacaaacat atgtgggcat cacagagaaa  
 1200  
 aaagctatca aacgtttcca gatcatgaat gaaatagtct atgagaaaat catggaacat  
 1260

gctggaaaaa atcaggtgct cgtgtttgtc cattctcgca aagaaactgg gaagacagca  
1320  
agggcaatcc gtgacatgtg tctggagaag gacactttgg gtctgtttct tcgcgagggg  
1380  
tctgcctcca ctgaagtcc tcttacagaa gcagagcagt gcaagaactt ggagctgaag  
1440  
gatcttttgc cctatggctt tgctattcat catgcaggca tgactagagt tgaccgaaca  
1500  
ctcgtggagg atctttttgc tgataaacat attcaggttt tagtttccac cgcaactcta  
1560  
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| Arg | Arg | Gln | Arg | Lys | Gly | Tyr | Glu | Glu | Val | His | Val | Pro | Ala | Leu | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Pro | Lys | Pro | Phe | Gly | Ser | Glu | Glu | Gln | Leu | Leu | Pro | Val | Glu | Lys | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Pro | Lys | Tyr | Ala | Gln | Ala | Gly | Phe | Glu | Gly | Phe | Lys | Thr | Leu | Asn | Arg |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Ile | Gln | Ser | Lys | Leu | Tyr | Arg | Ala | Ala | Leu | Glu | Thr | Asp | Glu | Asn | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Leu | Leu | Cys | Ala | Pro | Thr | Gly | Ala | Gly | Lys | Thr | Asn | Val | Ala | Leu | Met |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Cys | Met | Leu | Arg | Glu | Ile | Gly | Lys | His | Ile | Asn | Met | Asp | Gly | Thr | Ile |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Asn | Val | Asp | Asp | Phe | Lys | Ile | Ile | Tyr | Ile | Ala | Pro | Met | Arg | Ser | Leu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Val | Gln | Glu | Met | Val | Gly | Ser | Phe | Gly | Lys | Arg | Leu | Ala | Thr | Tyr | Gly |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     |     | 125 |     |     |
| Ile | Thr | Val | Ala | Glu | Leu | Thr | Gly | Asp | His | Gln | Leu | Cys | Lys | Glu | Glu |
|     | 130 |     |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |
| Ile | Ser | Ala | Thr | Gln | Ile | Ile | Val | Cys | Thr | Pro | Glu | Lys | Trp | Asp | Ile |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Ile | Thr | Arg | Lys | Gly | Gly | Glu | Arg | Thr | Tyr | Thr | Gln | Leu | Val | Arg | Leu |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Ile | Val | Leu | Asp | Glu | Ile | His | Leu | Leu | His | Asp | Asp | Arg | Gly | Pro | Val |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Leu | Glu | Ala | Leu | Val | Ala | Arg | Ala | Ile | Arg | Asn | Ile | Glu | Met | Thr | Gln |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     |     | 205 |     |     |
| Glu | Asp | Val | Arg | Leu | Ile | Gly | Leu | Ser | Ala | Thr | Leu | Pro | Asn | Tyr | Glu |
|     | 210 |     |     |     |     | 215 |     |     |     |     |     | 220 |     |     |     |
| Asp | Val | Ala | Thr | Phe | Leu | Arg | Val | Asp | Pro | Ala | Lys | Gly | Leu | Phe | Tyr |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     | 240 |     |
| Phe | Asp | Asn | Ser | Phe | Arg | Pro | Val | Pro | Leu | Glu | Gln | Thr | Tyr | Val | Gly |
|     |     |     | 245 |     |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Ile | Thr | Glu | Lys | Lys | Ala | Ile | Lys | Arg | Phe | Gln | Ile | Met | Asn | Glu | Ile |
|     |     | 260 |     |     |     |     |     | 265 |     |     |     |     | 270 |     |     |
| Val | Tyr | Glu | Lys | Ile | Met | Glu | His | Ala | Gly | Lys | Asn | Gln | Val | Leu | Val |
|     |     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |
| Phe | Val | His | Ser | Arg | Lys | Glu | Thr | Gly | Lys | Thr | Ala | Arg | Ala | Ile | Arg |
|     | 290 |     |     |     |     | 295 |     |     |     |     | 300 |     |     |     |     |
| Asp | Met | Cys | Leu | Glu | Lys | Asp | Thr | Leu | Gly | Leu | Phe | Leu | Arg | Glu | Gly |
| 305 |     |     |     |     | 310 |     |     |     |     | 315 |     |     |     | 320 |     |
| Ser | Ala | Ser | Thr | Glu | Val | Leu | Arg | Thr | Glu | Ala | Glu | Gln | Cys | Lys | Asn |
|     |     |     | 325 |     |     |     |     |     | 330 |     |     |     |     | 335 |     |
| Leu | Glu | Leu | Lys | Asp | Leu | Leu | Pro | Tyr | Gly | Phe | Ala | Ile | His | His | Ala |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
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| Gly | Met | Thr | Arg | Val | Asp | Arg | Thr | Leu | Val | Glu | Asp | Leu | Phe | Ala | Asp |  |  |  |  |
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| Lys | His | Ile | Gln | Val | Leu | Val | Ser | Thr | Ala | Thr | Leu | Ala | Trp | Gly | Val |  |  |  |  |
|     |     | 370 |     |     |     | 375 |     |     |     |     | 380 |     |     |     |     |  |  |  |  |
| Asn | Leu | Pro | Ala | His | Thr | Val | Ile | Ile | Lys | Gly | Thr | Gln | Val | Tyr | Ser |  |  |  |  |
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| Pro | Glu | Lys | Gly | Arg | Trp | Thr | Glu | Leu | Gly | Ala | Leu | Asp | Ile | Leu | Gln |  |  |  |  |
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| Ile | Leu | Ile | Thr | Ser | His | Gly | Glu | Leu | Gln | Tyr | Tyr | Leu | Ser | Leu | Leu |  |  |  |  |
|     |     | 435 |     |     |     | 440 |     |     |     |     |     | 445 |     |     |     |  |  |  |  |
| Asn | Gln | Gln | Leu | Pro | Ile | Glu | Ser | Gln | Met | Val | Ser | Lys | Leu | Pro | Asp |  |  |  |  |
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| Met | Leu | Asn | Ala | Glu | Ile | Val | Leu | Gly | Asn | Val | Gln | Asn | Ala | Lys | Asp |  |  |  |  |
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| Ala | Val | Asn | Trp | Leu | Gly | Tyr | Ala | Tyr | Leu | Tyr | Ile | Arg | Met | Leu | Arg |  |  |  |  |
|     |     |     | 485 |     |     |     |     |     | 490 |     |     |     |     | 495 |     |  |  |  |  |
| Ser | Pro | Thr | Leu | Tyr | Gly | Ile | Ser | His | Asp | Asp | Leu | Lys | Gly | Asp | Pro |  |  |  |  |
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| Gln | Val | Thr | Glu | Leu | Gly | Arg | Ile | Ala | Ser | His | Tyr | Tyr | Ile | Thr | Asn |  |  |  |  |
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|     |     |     | 565 |     |     |     |     |     | 570 |     |     |     |     | 575 |     |  |  |  |  |
| Ile | Glu | Leu | Phe | Arg | Val | Phe | Ser | Leu | Ser | Ser | Glu | Phe | Lys | Asn | Ile |  |  |  |  |
|     |     | 580 |     |     |     |     |     | 585 |     |     |     |     | 590 |     |     |  |  |  |  |
| Thr | Val | Arg | Glu | Glu | Glu | Lys | Leu | Glu | Leu | Gln | Lys | Leu | Leu | Glu | Arg |  |  |  |  |
|     |     | 595 |     |     |     |     | 600 |     |     |     |     | 605 |     |     |     |  |  |  |  |
| Val | Pro | Ile | Pro | Val | Lys | Glu | Ser | Ile | Glu | Glu | Pro | Ser | Ala | Lys | Ile |  |  |  |  |
|     | 610 |     |     |     |     | 615 |     |     |     |     | 620 |     |     |     |     |  |  |  |  |
| Asn | Val | Leu | Leu | Gln | Ala | Phe | Ile | Ser | Gln | Leu | Lys | Leu | Glu | Gly | Phe |  |  |  |  |
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| Ala | Leu | Met | Ala | Asp | Met | Val | Tyr | Val | Thr | Gln | Ser | Ala | Gly | Arg | Leu |  |  |  |  |
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|     | 675 |     |     |     |     |     | 680 |     |     |     |     | 685 | </  |     |     |  |  |  |  |

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|---|------|------|
| 770   | 775  | 780  |
| Ala Phe Trp Ile Leu Val Glu Asp Val Asp Ser Glu Val Ile Leu His |      |      |
| 785   | 790  | 795  |
| His Glu Tyr Phe Leu Leu Lys Ala Lys Tyr Ala Gln Asp Glu His Leu |      | 800  |
|   | 805  | 810  |
| Ile Thr Phe Phe Val Pro Val Phe Glu Pro Leu Pro Pro Gln Tyr Phe |      | 815  |
|   | 820  | 825  |
| Ile Arg Val Val Ser Asp Arg Trp Leu Ser Cys Glu Thr Gln Leu Pro |      | 830  |
|   | 835  | 840  |
| Val Ser Phe Arg His Leu Ile Leu Pro Glu Lys Tyr Pro Pro Pro Thr |      | 845  |
|   | 850  | 855  |
| Glu Leu Leu Asp Leu Gln Pro Leu Pro Val Ser Ala Leu Arg Asn Ser |      | 860  |
| 865   | 870  | 875  |
| Ala Phe Glu Ser Leu Tyr Gln Asp Lys Phe Pro Phe Phe Asn Pro Ile |      | 880  |
|   | 885  | 890  |
| Gln Thr Gln Val Phe Asn Thr Val Tyr Asn Ser Asp Asp Asn Val Phe |      | 895  |
|   | 900  | 905  |
| Val Gly Ala Pro Thr Gly Ser Gly Lys Thr Ile Cys Ala Glu Phe Ala |      | 910  |
|   | 915  | 920  |
| Ile Leu Arg Met Leu Leu Gln Ser Ser Glu Gly Arg Cys Val Tyr Ile |      | 925  |
|   | 930  | 935  |
| Thr Pro Met Glu Ala Leu Ala Glu Gln Val Tyr Met Asp Trp Tyr Glu |      | 940  |
| 945   | 950  | 955  |
| Lys Phe Gln Asp Arg Leu Asn Lys Lys Val Val Leu Leu Thr Gly Glu |      | 960  |
|   | 965  | 970  |
| Thr Ser Thr Asp Leu Lys Leu Leu Gly Lys Gly Asn Ile Ile Ile Ser |      | 975  |
|   | 980  | 985  |
| Thr Pro Glu Lys Trp Asp Ile Leu Ser Arg Arg Trp Lys Gln Arg Lys |      | 990  |
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| Asn Val Gln Asn Ile Asn Leu Phe Val Val Asp Glu Val His Leu Ile |      | 1005 |
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| Gly Gly Glu Asn Gly Pro Val Leu Glu Val Ile Cys Ser Arg Met Arg |      | 1020 |
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| Tyr Ile Ser Ser Gln Ile Glu Arg Pro Ile Arg Ile Val Ala Leu Ser |      | 1040 |
|   | 1045 | 1050 |
| Ser Ser Leu Ser Asn Ala Lys Asp Val Ala His Trp Leu Gly Cys Ser |      | 1055 |
|   | 1060 | 1065 |
| Ala Thr Ser Thr Phe Asn Phe His Pro Asn Val Arg Pro Val Pro Leu |      | 1070 |
|   | 1075 | 1080 |
| Glu Leu His Ile Gln Gly Phe Asn Ile Ser His Thr Gln Thr Arg Leu |      | 1085 |
|   | 1090 | 1095 |
| Leu Ser Met Ala Lys Pro Val Tyr His Ala Ile Thr Lys His Ser Pro |      | 1100 |
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| Lys Lys Pro Val Ile Val Phe Val Pro Ser Arg Lys Gln Thr Arg Leu |      | 1120 |
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| Leu Ser Asp Ser Thr Leu Lys Glu Thr Leu Leu Asn Gly Val Gly Tyr |      | 1165 |
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| Leu His Glu Gly Leu Ser Pro Met Glu Arg Arg Leu Val Glu Gln Leu |      | 1180 |
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| Trp Gly Met Asn Val Ala Ala His Leu Val Ile Ile Met Asp Thr Gln |      |      |      |      |      |
|   | 1220 |      | 1225 |      | 1230 |
| Tyr Tyr Asn Gly Lys Ile His Ala Tyr Val Asp Tyr Pro Ile Tyr Asp |      |      |      |      |      |
|   | 1235 |      | 1240 |      | 1245 |
| Val Leu Gln Met Val Gly His Ala Asn Arg Pro Leu Gln Asp Asp Glu |      |      |      |      |      |
|   | 1250 |      | 1255 |      | 1260 |
| Gly Arg Cys Val Ile Met Cys Gln Gly Ser Lys Lys Asp Phe Phe Lys |      |      |      |      |      |
| 1265  |      | 1270 |      | 1275 | 1280 |
| Lys Phe Leu Tyr Glu Pro Leu Pro Val Glu Ser His Leu Asp His Cys |      |      |      |      |      |
|   | 1285 |      | 1290 |      | 1295 |
| Met His Asp His Phe Asn Ala Glu Ile Val Thr Lys Thr Ile Glu Asn |      |      |      |      |      |
|   | 1300 |      | 1305 |      | 1310 |
| Lys Gln Asp Ala Val Asp Tyr Leu Thr Trp Thr Phe Leu Tyr Arg Arg |      |      |      |      |      |
|   | 1315 |      | 1320 |      | 1325 |
| Met Thr Gln Asn Pro Asn Tyr Tyr Asn Leu Gln Gly Ile Ser His Arg |      |      |      |      |      |
|   | 1330 |      | 1335 |      | 1340 |
| His Leu Ser Asp His Leu Ser Glu Leu Val Glu Gln Thr Leu Ser Asp |      |      |      |      |      |
| 1345  |      | 1350 |      | 1355 | 1360 |
| Leu Glu Gln Ser Lys Cys Ile Ser Ile Glu Asp Glu Met Asp Val Ala |      |      |      |      |      |
|   | 1365 |      | 1370 |      | 1375 |
| Pro Leu Asn Leu Gly Met Ile Ala Ala Tyr Tyr Tyr Ile Asn Tyr Thr |      |      |      |      |      |
|   | 1380 |      | 1385 |      | 1390 |
| Thr Ile Glu Leu Phe Ser Met Ser Leu Asn Ala Lys Thr Lys Val Arg |      |      |      |      |      |
|   | 1395 |      | 1400 |      | 1405 |
| Gly Leu Ile Glu Ile Ile Ser Asn Ala Ala Glu Tyr Glu Asn Ile Pro |      |      |      |      |      |
|   | 1410 |      | 1415 |      | 1420 |
| Ile Arg His His Glu Asp Asn Leu Leu Arg Gln Leu Ala Gln Lys Val |      |      |      |      |      |
| 1425  |      | 1430 |      | 1435 | 1440 |
| Pro His Lys Leu Asn Asn Pro Lys Phe Asn Asp Pro His Val Lys Thr |      |      |      |      |      |
|   | 1445 |      | 1450 |      | 1455 |
| Asn Leu Leu Leu Gln Ala His Leu Ser Arg Met Gln Leu Ser Ala Glu |      |      |      |      |      |
|   | 1460 |      | 1465 |      | 1470 |
| Leu Gln Ser Asp Thr Glu Glu Ile Leu Ser Lys Ala Ile Arg Leu Ile |      |      |      |      |      |
|   | 1475 |      | 1480 |      | 1485 |
| Gln Ala Cys Val Asp Val Leu Ser Ser Asn Gly Trp Leu Ser Pro Ala |      |      |      |      |      |
|   | 1490 |      | 1495 |      | 1500 |
| Leu Ala Ala Met Glu Leu Ala Gln Met Val Thr Gln Ala Met Trp Ser |      |      |      |      |      |
| 1505  |      | 1510 |      | 1515 | 1520 |
| Lys Asp Ser Tyr Leu Lys Gln Leu Pro His Phe Thr Ser Glu His Ile |      |      |      |      |      |
|   | 1525 |      | 1530 |      | 1535 |
| Lys Arg Cys Thr Asp Lys Gly Val Glu Ser Val Phe Asp Ile Met Glu |      |      |      |      |      |
|   | 1540 |      | 1545 |      | 1550 |
| Met Glu Asp Glu Glu Arg Asn Ala Leu Leu Gln Leu Thr Asp Ser Gln |      |      |      |      |      |
|   | 1555 |      | 1560 |      | 1565 |
| Ile Ala Asp Val Ala Arg Phe Cys Asn Arg Tyr Pro Asn Ile Glu Leu |      |      |      |      |      |
|   | 1570 |      | 1575 |      | 1580 |
| Ser Tyr Glu Val Val Asp Lys Asp Ser Ile Arg Ser Gly Gly Pro Val |      |      |      |      |      |
| 1585  |      | 1590 |      | 1595 | 1600 |
| Val Val Leu Val Gln Leu Glu Arg Glu Glu Val Thr Gly Pro Val     |      |      |      |      |      |
|   | 1605 |      | 1610 |      | 1615 |
| Ile Ala Pro Leu Phe Pro Gln Lys Arg Glu Glu Gly Trp Trp Val Val |      |      |      |      |      |
|   | 1620 |      | 1625 |      | 1630 |
| Ile Gly Asp Ala Lys Ser Asn Ser Leu Ile Ser Ile Lys Arg Leu Thr |      |      |      |      |      |

1635                      1640                      1645  
 Leu Gln Gln Lys Ala Lys Val Lys Leu Asp Phe Val Ala Pro Ala Thr  
 1650                      1655                      1660  
 Gly Ala His Asn Tyr Thr Leu Tyr Phe Met Ser Asp Ala Tyr Met Gly  
 1665                      1670                      1675                      1680  
 Cys Asp Gln Glu Tyr Lys Phe Ser Val Asp Val Lys Glu Ala Glu Thr  
 1685                      1690                      1695  
 Asp Ser Asp Ser Asp  
 1700

<210> 2235  
 <211> 586  
 <212> DNA  
 <213> Homo sapiens

<400> 2235  
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 60  
 tcagtgtctg cacattctcc actggcagaa tgactcccga cgtgggtcgg gctccccgga  
 120  
 agacaccct cgaagcagtg gtgcctctag catcttcgac ctgaggaacc tggcagctga  
 180  
 ctcattgttg ccctctctgc tagagcgggc ggcccagaa gatgtggacc ggcgcaatga  
 240  
 agcccttcga cggcagcacc ggccccggc cctgcttccc ctctaccgg cacctgacga  
 300  
 ggatgaagcc ggggaacgct gtagccgct agagccacc cgcgagcac tttggacaaa  
 360  
 ggatcttggc caagtgtctg tcgctcaagt tcgagattga aattgagccc atctttggga  
 420  
 tcttggtct gtatgatgtg cggaagaaaa agaagatctc ggaaaacttc tacttcgacc  
 480  
 tgaactcgga ctccatgaag gggctgcttc gggctcatgg caccaccct gccatctcca  
 540  
 ccctggcccg ctctgccatc ttctctgtga cctaccctc acgcgt  
 586

<210> 2236  
 <211> 123  
 <212> PRT  
 <213> Homo sapiens

<400> 2236  
 Met Ser Pro Lys Gln Pro Leu His Gly Val Arg Val Gln Val Glu Val  
 1                      5                      10                      15  
 Glu Val Phe Arg Asp Leu Leu Phe Leu Pro His Ile Ile Gln Ser Gln  
 20                      25                      30  
 Asp Pro Lys Asp Gly Leu Asn Phe Asn Leu Glu Leu Glu Arg Gln Thr  
 35                      40                      45  
 Leu Asp Gln Asp Pro Leu Ser Lys Val Leu Ala Gly Val Ala Leu Gly  
 50                      55                      60  
 Gly Tyr Ser Val Pro Arg Leu His Pro Arg Gln Val Pro Gly Arg Gly  
 65                      70                      75                      80  
 Glu Ala Gly Pro Gly Ala Gly Ala Ala Val Glu Gly Leu His Cys Ala

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     | 85  |     | 90  |     | 95  |     |     |     |     |     |     |     |     |     |     |
| Gly | Pro | His | Leu | Leu | Gly | Pro | Pro | Ala | Leu | Ala | Glu | Arg | Ala | Thr | Met |
|     | 100 |     |     |     | 105 |     |     |     |     |     |     |     | 110 |     |     |
| Ser | Gln | Leu | Pro | Gly | Ser | Ser | Gly | Arg | Arg | Cys |     |     |     |     |     |
|     | 115 |     |     |     | 120 |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 2237

&lt;211&gt; 421

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2237

cctaggaagg cacacctgtg tccactgca gccaaagagga agcaccceaa acactcctct  
60  
tggggcgag gagtgctggc cagcttgggg atagtccctg gaagtggctg ggagcactga  
120  
gggaggagct gaggtccaag cctcctcca gtgcatcacc ctggtcagga gtggggcagt  
180  
gtggagccag gggctcttca gccagcacct gctgcactat gggctccagc tgtgcaagac  
240  
caccctgag aaggagtctt gttgggagca ggggtgggaa gcactgtggg agaggtgtcc  
300  
ttggctcggg tagcaggac cttgatgtat cttgaagcca gggggccgac tgaggcgctt  
360  
gtctgaaggc ctccatgaga gggagggggc tggagggggc tgttcccaat aatagctcta  
420  
t  
421

&lt;210&gt; 2238

&lt;211&gt; 124

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2238

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Glu | Ala | Phe | Arg | Gln | Ala | Pro | Gln | Ser | Ala | Pro | Trp | Leu | Gln | Asp |
| 1   |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Thr | Ser | Arg | Ser | Leu | Leu | Pro | Glu | Pro | Arg | Thr | Pro | Leu | Pro | Gln | Cys |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |     |
| Phe | Pro | Thr | Leu | Leu | Pro | Thr | Arg | Leu | Leu | Leu | Thr | Gly | Gly | Leu | Ala |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Gln | Leu | Glu | Pro | Ile | Val | Gln | Gln | Val | Leu | Ala | Glu | Glu | Pro | Leu | Ala |
|     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |
| Pro | His | Cys | Pro | Thr | Pro | Asp | Gln | Gly | Asp | Ala | Leu | Glu | Glu | Gly | Leu |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Asp | Leu | Ser | Ser | Ser | Leu | Ser | Ala | Pro | Asp | His | Phe | Gln | Gly | Leu | Ser |
|     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Pro | Ser | Trp | Pro | Ala | Leu | Leu | Arg | Pro | Lys | Arg | Ser | Val | Trp | Gly | Ala |
|     |     | 100 |     |     |     |     | 105 |     |     |     |     |     | 110 |     |     |
| Ser | Ser | Trp | Leu | Gln | Trp | Asp | Thr | Gly | Val | Pro | Ser |     |     |     |     |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     |     |     |     |     |

&lt;210&gt; 2239

&lt;211&gt; 623

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2239

gctagcagga ctcagaaatc tgctgttgag cacaaagcca aaaaatctct gtcccatcct  
 60  
 agccattcca ggcttgggcc catggtcacc ccacacaata aggctaagag tccaggtgtc  
 120  
 aggcagccag gcagcagctc tagctcagcc cctgggcagc ccagcacagg ggttgctcga  
 180  
 cccacagtta gttctggccc tgtgcctagg cgccagaatg gcagctccag ctcaggacct  
 240  
 gagcgatcaa tcagtgggtc caagaagcca accaatgact caaatccctc tagggcgaca  
 300  
 gtcagtggta catgtggccc tggacaacct gcaagcagct caggtggccc tgggcgaccc  
 360  
 atcagtgggt cagttagttc tgcaagaccc ttgggcagct ctggtggccc tggccggcct  
 420  
 gtgagcagtc cacatgaact tcgacgacca gtgagtggct tgggcccccc ggggcggctc  
 480  
 gtcagtggcc ctgggagatc cataagtggc ccaattccag ctggacggac tgtcagtaat  
 540  
 tcagtcccag gaagaccagt ggcagcttg ggacctgggc aaacagttag tagctcaggt  
 600  
 cccactataa agcctaagtg cac  
 623

&lt;210&gt; 2240

&lt;211&gt; 207

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2240

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ser | Arg | Thr | Gln | Lys | Ser | Ala | Val | Glu | His | Lys | Ala | Lys | Lys | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Leu | Ser | His | Pro | Ser | His | Ser | Arg | Pro | Gly | Pro | Met | Val | Thr | Pro | His |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Asn | Lys | Ala | Lys | Ser | Pro | Gly | Val | Arg | Gln | Pro | Gly | Ser | Ser | Ser | Ser |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ser | Ala | Pro | Gly | Gln | Pro | Ser | Thr | Gly | Val | Ala | Arg | Pro | Thr | Val | Ser |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Ser | Gly | Pro | Val | Pro | Arg | Arg | Gln | Asn | Gly | Ser | Ser | Ser | Ser | Gly | Pro |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |
| Glu | Arg | Ser | Ile | Ser | Gly | Ser | Lys | Lys | Pro | Thr | Asn | Asp | Ser | Asn | Pro |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ser | Arg | Arg | Thr | Val | Ser | Gly | Thr | Cys | Gly | Pro | Gly | Gln | Pro | Ala | Ser |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Ser | Ser | Gly | Gly | Pro | Gly | Arg | Pro | Ile | Ser | Gly | Ser | Val | Ser | Ser | Ala |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Arg | Pro | Leu | Gly | Ser | Ser | Arg | Gly | Pro | Gly | Arg | Pro | Val | Ser | Ser | Pro |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| His | Glu | Leu | Arg | Arg | Pro | Val | Ser | Gly | Leu | Gly | Pro | Pro | Gly | Arg | Ser |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Val | Ser | Gly | Pro | Gly | Arg | Ser | Ile | Ser | Gly | Pro | Ile | Pro | Ala | Gly | Arg |



|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |  |  |  |  |
| Thr | Val | Ser | Asn | Ser | Val | Pro | Gly | Arg | Pro | Val | Ser | Ser | Leu | Gly | Pro |  |  |  |  |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |  |  |  |  |
| Gly | Gln | Thr | Val | Ser | Ser | Ser | Gly | Pro | Thr | Ile | Lys | Pro | Lys | Cys |     |  |  |  |  |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |  |  |  |  |

&lt;210&gt; 2241

&lt;211&gt; 656

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2241

```

nnacgcgtga agggcagcag caacaccacg gagtgtgttc ccggtgccac ctccgagcac
60
gtggccgaga tcgtgggcag gcaaggctgc aagattaagg ccttgagggc caagaccaac
120
acctacatta gaaccccgagg aaggggcgag gaaccagtgt tcatggtgac agggcgacgg
180
gaggacgtgg ccacagcccg gcgggaaatc atctcagcag cggagcactt ctccatgatc
240
cgtgcctccc gcaacaagtc aggcgcgcgc tttggtgtgg ctctgtctct gccgggccag
300
gtgaccatcc gtgtgcgggt gccctaccgc gtggtggggc tgggtggtggg ccccaaaggg
360
gcaaccatca agcgcattca gcagcaaacc aacacatata ttatcacacc aagccgtgac
420
cgcgaccccg tgttcgagat cacgggtgcc ccaggcaacg tggagcgtgc gcgcgaggag
480
atcgagacgc acatcgcggt gcgcactggc aagatcctcg agtacaacaa tgaaaacgac
540
ttcctggcgg ggagccccga cgcagcaatc gatagccgct actccgacgc ctggcggggtg
600
caccagcccg gctgcaagcc cctctccacc ttccggcaga acagcctggg ctgcag
656

```

&lt;210&gt; 2242

&lt;211&gt; 218

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2242

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| Xaa | Arg | Val | Lys | Gly | Ser | Ser | Asn | Thr | Thr | Glu | Cys | Val | Pro | Val | Pro |  |  |  |  |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |  |  |  |  |
| Thr | Ser | Glu | His | Val | Ala | Glu | Ile | Val | Gly | Arg | Gln | Gly | Cys | Lys | Ile |  |  |  |  |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |  |  |  |  |
| Lys | Ala | Leu | Arg | Ala | Lys | Thr | Asn | Thr | Tyr | Ile | Arg | Thr | Pro | Gly | Arg |  |  |  |  |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |  |  |  |  |
| Gly | Glu | Glu | Pro | Val | Phe | Met | Val | Thr | Gly | Arg | Arg | Glu | Asp | Val | Ala |  |  |  |  |
|     | 50  |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |     |  |  |  |  |
| Thr | Ala | Arg | Arg | Glu | Ile | Ile | Ser | Ala | Ala | Glu | His | Phe | Ser | Met | Ile |  |  |  |  |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |  |  |  |  |
| Arg | Ala | Ser | Arg | Asn | Lys | Ser | Gly | Ala | Ala | Phe | Gly | Val | Ala | Pro | Ala |  |  |  |  |
|     |     |     | 85  |     |     |     | 90  |     |     |     |     |     | 95  |     |     |  |  |  |  |
| Leu | Pro | Gly | Gln | Val | Thr | Ile | Arg | Val | Arg | Val | Pro | Tyr | Arg | Val | Val |  |  |  |  |

```

      100      105      110
Gly Leu Val Val Gly Pro Lys Gly Ala Thr Ile Lys Arg Ile Gln Gln
      115      120      125
Gln Thr Asn Thr Tyr Ile Ile Thr Pro Ser Arg Asp Arg Asp Pro Val
      130      135      140
Phe Glu Ile Thr Gly Ala Pro Gly Asn Val Glu Arg Ala Arg Glu Glu
145      150      155      160
Ile Glu Thr His Ile Ala Val Arg Thr Gly Lys Ile Leu Glu Tyr Asn
      165      170      175
Asn Glu Asn Asp Phe Leu Ala Gly Ser Pro Asp Ala Ala Ile Asp Ser
      180      185      190
Arg Tyr Ser Asp Ala Trp Arg Val His Gln Pro Gly Cys Lys Pro Leu
      195      200      205
Ser Thr Phe Arg Gln Asn Ser Leu Gly Cys
      210      215

```

&lt;210&gt; 2243

&lt;211&gt; 384

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2243

```

gaattcagca tttaaagtgc actcggtggc atgcaatttg ctgtcatgaa aacgactgtg
60
gattcatttc ctggtaagaa tcttctgact tattgagctg catgtcagaa gcaaaaagca
120
aaaaaaccaa atatgtacat aaaacagtgt tatcattcct taaaagagaa ggaaaataaa
180
tccttaaata atgtggactg gaacacagaa atccaaggct ggccgcacgg gtcctggctg
240
ggatggcatc cggggagctg ctgctgggga cgtgcttgcc ggcacaggtc aggggagccg
300
ggttctgect cctccttgcc cactctcttt gcgccctccc tgtgtctgcc tgtcttgttt
360
tacctcccat cctgggccct tgga
384

```

&lt;210&gt; 2244

&lt;211&gt; 108

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2244

```

Met Gly Gly Lys Thr Arg Gln Ala Ser Thr Gly Arg Ala Gln Arg Glu
 1      5      10      15
Trp Ala Arg Arg Arg Gln Asn Pro Ala Pro Leu Thr Cys Ala Gly Lys
      20      25      30
His Val Pro Ser Ser Ser Ser Pro Asp Ala Ile Pro Ala Arg Thr Arg
      35      40      45
Ala Ala Ser Leu Gly Phe Leu Cys Ser Ser Pro His Tyr Leu Gly Ile
      50      55      60
Tyr Phe Pro Ser Leu Leu Arg Asn Asp Asn Thr Val Leu Cys Thr Tyr
      65      70      75      80
Leu Val Phe Leu Leu Phe Ala Ser Asp Met Gln Leu Asn Lys Ser Glu

```

85 90 95  
 Asp Ser Tyr Gln Glu Met Asn Pro Gln Ser Phe Ser  
 100 105

<210> 2245  
 <211> 632  
 <212> DNA  
 <213> Homo sapiens

<400> 2245  
 acgcgtgcga ttaccgtcaa ggctgggtgtg gtgagcgctg atctgcacga gcggacgtct  
 60  
 tcgagagaag aggtcggacg cgagaggctc aactatgggtc acaccttggc ccacgtatt  
 120  
 gaggccacaca agcatttcac gtggcgctcat ggcgaggctg acgcggtggg catggtgttt  
 180  
 gcggccgaac tgtcgcaccg gtacctggga ctgtccgatg aggtcgttgc gcgcaccgc  
 240  
 actatcctgt ctgagatcgg attgacctgtt acctgtgacg agattaagtg ggcagatctg  
 300  
 cgcaagacga tgaacgtgga caagaaaacc agggtagacc cgcagaccgg gcgtcaagtg  
 360  
 ttgcggtttg tcggtattca caaaccgggt caggtcgcca tgatcgtcga ccctgacgag  
 420  
 gccgcttttag ccgagtgtta cgaccgggtgt tccgcacgggt aaaaacgttc ggaaatgaac  
 480  
 atgtggctgc gggtcagtcg gcattcaggc ctccgtgacg ccgtcgaccc caagtgatgt  
 540  
 gacgattcgg gaaatatctt gttgggcact cttgagcctc gcctgattcc ccataccoga  
 600  
 cttaagttca gtatcgacgg catgaatccg ga  
 632

<210> 2246  
 <211> 153  
 <212> PRT  
 <213> Homo sapiens

<400> 2246  
 Thr Arg Ala Ile Thr Val Lys Ala Gly Val Val Ser Ala Asp Leu His  
 1 5 10 15  
 Glu Arg Thr Ser Ser Arg Glu Glu Val Gly Arg Glu Arg Leu Asn Tyr  
 20 25 30  
 Gly His Thr Leu Ala His Ala Ile Glu Ala His Lys His Phe Thr Trp  
 35 40 45  
 Arg His Gly Glu Ala Asp Ala Val Gly Met Val Phe Ala Ala Glu Leu  
 50 55 60  
 Ser His Arg Tyr Leu Gly Leu Ser Asp Glu Val Val Ala Arg Thr Arg  
 65 70 75 80  
 Thr Ile Leu Ser Glu Ile Gly Leu Pro Val Thr Cys Asp Glu Ile Lys  
 85 90 95  
 Trp Ala Asp Leu Arg Lys Thr Met Asn Val Asp Lys Lys Thr Arg Val  
 100 105 110  
 Asp Pro Gln Thr Gly Arg Gln Val Leu Arg Phe Val Gly Ile His Lys

115 120 125  
 Pro Gly Gln Val Ala Met Ile Val Asp Pro Asp Glu Ala Ala Leu Ala  
 130 135 140  
 Glu Cys Tyr Asp Arg Cys Ser Ala Arg  
 145 150

<210> 2247  
 <211> 324  
 <212> DNA  
 <213> Homo sapiens

<400> 2247  
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 60  
 gaggttggggc gtggggagtg ccgggtacag tcagagttgc caggacagtt tggagcagtg  
 120  
 cctcttaatc ttggccgcac agcacctggg agctttaaat agacccccac gccctggggc  
 180  
 cccccaccgc tgaccacccc gatctcagct ctgcctttcc cgcctctctg ctgggttgca  
 240  
 taagccagcg attcccaacc ccggctgtac ctggaagcta ccccaggagc ttctggagaa  
 300  
 tgtgccgtgt gagccatccc cctg  
 324

<210> 2248  
 <211> 105  
 <212> PRT  
 <213> Homo sapiens

<400> 2248  
 Met Ala His Thr Ala His Ser Pro Glu Ala Pro Gly Val Ala Ser Arg  
 1 5 10 15  
 Tyr Ser Arg Gly Trp Glu Ser Leu Ala Tyr Ala Thr Gln Gln Arg Gly  
 20 25 30  
 Gly Lys Gly Arg Ala Glu Ile Gly Trp Val Ser Gly Gly Gly Ala Gln  
 35 40 45  
 Gly Val Gly Val Tyr Leu Lys Leu Pro Gly Ala Val Arg Pro Arg Leu  
 50 55 60  
 Arg Gly Thr Ala Pro Asn Cys Pro Gly Asn Ser Asp Cys Thr Arg His  
 65 70 75 80  
 Ser Pro Arg Pro Thr Ser Leu Leu Pro Leu Gly Arg Leu Ala Ser Ser  
 85 90 95  
 Val Gly Glu Asn Pro Gly Gly Glu Arg  
 100 105

<210> 2249  
 <211> 394  
 <212> DNA  
 <213> Homo sapiens

<400> 2249  
 gaaaaccgga taacagggtg tatacaagcc tctgagttct gggagcaaca accagctcaa  
 60

cccgcaaggg aaagtgagaa agcaattaag ttgggaaccg cggggttttc ccattcccac  
 120  
 ggtggaaacc gcgccagtg aattgaaatc cgcttcctta aggcgaaatg ggcccttaaa  
 180  
 aggcaaggtc aaccgcccgc cagtgtgatg gaatttgcaa gaattcgggt tagcacctc  
 240  
 ccggcttttc tcccgaccgc gtgcaggggtg ggctgcgctg ggctgggag gaactgggag  
 300  
 ctgggggctc atgtcctgta taaaggggct gcaggggcgc tgtctcccc cagaagactg  
 360  
 gccacatggg gacaggcctc ctgggggcag atct  
 394

<210> 2250

<211> 104

<212> PRT

<213> Homo sapiens

<400> 2250

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | Pro | Gln | Leu | Pro | Val | Pro | Pro | Arg | Pro | Ser | Ala | Ala | His | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ala | Arg | Gly | Arg | Glu | Lys | Ser | Arg | Glu | Gly | Ala | Lys | Pro | Asn | Ser | Cys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Lys | Phe | His | His | Thr | Gly | Gly | Arg | Leu | Thr | Leu | Pro | Phe | Lys | Gly | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Phe | Arg | Leu | Lys | Glu | Ala | Asp | Phe | Asn | Ser | Leu | Ala | Ala | Val | Ser | Thr |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Val | Gly | Met | Gly | Lys | Pro | Arg | Gly | Ser | Gln | Leu | Asn | Cys | Phe | Leu | Thr |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     | 80  |     |     |
| Phe | Pro | Cys | Gly | Leu | Ser | Trp | Leu | Leu | Leu | Pro | Glu | Leu | Arg | Gly | Leu |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Tyr | Thr | Pro | Cys | Tyr | Pro | Val | Phe |     |     |     |     |     |     |     |     |
|     |     |     | 100 |     |     |     |     |     |     |     |     |     |     |     |     |

<210> 2251

<211> 654

<212> DNA

<213> Homo sapiens

<400> 2251

acgcgtactt attcgccacc atgattatga ccagtgtttc cagtccgttc agttgttgca  
 60  
 gtggaatagt cagggttaaatt ttaatgtgac cgtttatcgc aatctgccga ccactcgcga  
 120  
 ttcaatcatg acttcgtgat aaaagattga gtgtgaggtt ataacgccga agcggtaaaa  
 180  
 attttaattt ttgccgctga ggggttgacc aagcgaagcg cggtagggtt tctgcttagg  
 240  
 agtttaatca tgtttcagac ttttatttct cgccataatt caaacttttt ttctgataag  
 300  
 ctggttctca cttctgttac tccagettct tcggcacctg ttttacagac acctaaagct  
 360  
 acatcgctcaa cgttatatatt tgatagtttg acggttaatg ctggtaatgg tggttttctt  
 420

cattgcattc agatggatac atctgtcaac gccgctaac aggttggttc tgttggtgct  
 480  
 gatattgctt ttgatgccga ccctaaattt tttgectgtt tggttcgctt tgagtcttct  
 540  
 tcggttccga ctacctccc gactgcctat gatgtttatc ctttggatgg tcgccatgat  
 600  
 ggtggttatt ataccgtcaa ggactgtgtg actattgacg tccttcctcg tacg  
 654

<210> 2252

<211> 135

<212> PRT

<213> Homo sapiens

<400> 2252

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Phe | Gln | Thr | Phe | Ile | Ser | Arg | His | Asn | Ser | Asn | Phe | Phe | Ser | Asp |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Lys | Leu | Val | Leu | Thr | Ser | Val | Thr | Pro | Ala | Ser | Ser | Ala | Pro | Val | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     | 30  |     |     |     |
| Gln | Thr | Pro | Lys | Ala | Thr | Ser | Ser | Thr | Leu | Tyr | Phe | Asp | Ser | Leu | Thr |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Val | Asn | Ala | Gly | Asn | Gly | Gly | Phe | Leu | His | Cys | Ile | Gln | Met | Asp | Thr |
|     | 50  |     |     |     | 55  |     |     |     |     |     | 60  |     |     |     |     |
| Ser | Val | Asn | Ala | Ala | Asn | Gln | Val | Val | Ser | Val | Gly | Ala | Asp | Ile | Ala |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Phe | Asp | Ala | Asp | Pro | Lys | Phe | Phe | Ala | Cys | Leu | Val | Arg | Phe | Glu | Ser |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ser | Ser | Val | Pro | Thr | Thr | Leu | Pro | Thr | Ala | Tyr | Asp | Val | Tyr | Pro | Leu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Asp | Gly | Arg | His | Asp | Gly | Gly | Tyr | Tyr | Thr | Val | Lys | Asp | Cys | Val | Thr |
|     |     | 115 |     |     |     | 120 |     |     |     |     |     | 125 |     |     |     |
| Ile | Asp | Val | Leu | Pro | Arg | Thr |     |     |     |     |     |     |     |     |     |
|     |     | 130 |     |     |     | 135 |     |     |     |     |     |     |     |     |     |

<210> 2253

<211> 327

<212> DNA

<213> Homo sapiens

<400> 2253

ggatcctgct gggcctcttt tacgtgatgt tgaccacagcc gctggtgcgc attattcgcg  
 60  
 cactgagcac cagcaagcag gccgcctgg attgcccacc gggtcacgaa aacgatgaaa  
 120  
 tcggcggtatt ggtcaacgtc gcccaaccagc aattcgacaa tatggaaacc gaaatcgagc  
 180  
 agcgccgcca cgccgaggac cgctcaccg aatacctggg ccaactggaa gatatcgctc  
 240  
 ccgcacgcac cctggagctc aaggccagca accaacgctt gagccaatcc aacgatgagc  
 300  
 tggaagcggc aaagttgacc gccttgg  
 327

<210> 2254

<211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 2254  
 Met Leu Thr Gln Pro Leu Val Arg Ile Ile Arg Ala Leu Ser Thr Ser  
                                   5                                  10                                  15  
 Lys Gln Ala Arg Leu Asp Cys Pro Pro Gly His Glu Asn Asp Glu Ile  
                                   20                                  25                                  30  
 Gly Val Leu Val Asn Val Ala Asn Gln Gln Phe Asp Asn Met Glu Thr  
                                   35                                  40                                  45  
 Glu Ile Glu Gln Arg Arg His Ala Glu Asp Arg Arg Leu Thr Glu Tyr Leu  
                                   50                                  55                                  60  
 Gly Gln Leu Glu Asp Ile Val Ser Ala Arg Thr Leu Glu Leu Lys Ala  
                                   65                                  70                                  75                                  80  
 Ser Asn Gln Arg Leu Ser Gln Ser Asn Asp Glu Leu Glu Ala Ala Lys  
                                   85                                  90                                  95  
 Leu Thr Ala Leu  
                                   100

<210> 2255  
 <211> 357  
 <212> DNA  
 <213> Homo sapiens

<400> 2255  
 nngctagcac atgagaagtg tgaagtttat actttgcttg ggcgatcacg ccgttttcca  
 60  
 aatatggctc atgcaacttc tggccaaagg ggtcacattg agcgtgctgc tatcaatgct  
 120  
 cctgtacagg gcagtgacgc tgatgttgct atgtgtgcaa tgcttgagat agacaggaat  
 180  
 actcgtctta aggagcttgg ttggacgcta ctcttgacagg tgcattgatga agtgatactg  
 240  
 gaagggcctt cagagtctgc ggagtnngcc aagtccatag ttgttgagtg catgtctaag  
 300  
 cccttctatg gcaccaatat cctgaggggc gaccttgctg ttgatgcaa gtgtgca  
 357

<210> 2256  
 <211> 119  
 <212> PRT  
 <213> Homo sapiens

<400> 2256  
 Xaa Leu Ala His Glu Lys Cys Glu Val Tyr Thr Leu Leu Gly Arg Ser  
                                   5                                  10                                  15  
 Arg Arg Phe Pro Asn Met Ala His Ala Thr Ser Gly Gln Arg Gly His  
                                   20                                  25                                  30  
 Ile Glu Arg Ala Ala Ile Asn Ala Pro Val Gln Gly Ser Ala Ala Asp  
                                   35                                  40                                  45  
 Val Ala Met Cys Ala Met Leu Glu Ile Asp Arg Asn Thr Arg Leu Lys  
                                   50                                  55                                  60  
 Glu Leu Gly Trp Thr Leu Leu Leu Gln Val His Asp Glu Val Ile Leu

|            |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <400> 2258 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Xaa        | Met | Thr | Lys | Asn | Met | Asn | Gln | Asn | Ser | Asp | Ser | Gly | Ser | Thr | Asn |
| 1          |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Asn        | Tyr | Lys | Ser | Leu | Lys | Pro | Lys | Leu | Glu | Asn | Leu | Ser | Ser | Leu | Pro |
|            |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Pro        | Asp | Ser | Asp | Arg | Thr | Ser | Glu | Val | Tyr | Leu | His | Glu | Glu | Leu | Gln |
|            |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Gln        | Asp | Met | Gln | Lys | Phe | Lys | Asn | Glu | Val | Asn | Thr | Leu | Glu | Glu | Glu |
|            | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Phe        | Leu | Ala | Leu | Lys | Lys | Glu | Asn | Val | Gln | Leu | His | Lys | Glu | Val | Glu |
| 65         |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Glu        | Glu | Met | Glu | Lys | His | Arg | Ser | Asn | Ser | Thr | Glu | Leu | Ser | Gly | Thr |



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<210> 2259
<211> 425
<212> DNA
<213> Homo sapiens
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<210> 2260
<211> 141
<212> PRT
<213> Homo sapiens
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1658

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
|     |     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |  |  |  |  |
| Val | Val | Asp | Asp | Arg | Pro | Glu | Tyr | Val | Val | Pro | Glu | Phe | Phe | Asp | Glu |  |  |  |  |
|     |     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |  |  |  |  |
| Arg | Val | Thr | Arg | Lys | Cys | Leu | Pro | Leu | Glu | Asn | Phe | Lys | Asn | Asp | Leu |  |  |  |  |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |  |  |  |  |
| Pro | Leu | Asp | Glu | Tyr | Asn | Gly | Phe | Ile | Ile | Val | Thr | Arg |     |     |     |  |  |  |  |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |  |  |  |  |

<210> 2261  
 <211> 660  
 <212> DNA  
 <213> Homo sapiens

<400> 2261  
 ngctagctgc tgctcctgag gatcggccgc agaattattgc tgccgatctg tccgggttgc  
 60  
 ttgagcccaa gcgcgaggtc gatgtgtccg gcgaccgcgc gcgttgccgt gggagcatag  
 120  
 tgctcgggtgca cgctgaccga gaggtccgtg cggagagtac tcccgatgat atttgccggc  
 180  
 agctcgatgc cgtggccgcc atgatggccc ttgtctatgg gtcgaatgtg actattcccg  
 240  
 acgatgccgg gaggtctctc gacaagcttc actgaacggg gttcaattgg tcccaacggc  
 300  
 tgcccatgtg ggcagccgct ctatctcgtc atgggaagga acccgatgtc gtcacgcaat  
 360  
 gggtttccagg ccaccgacct ggctcttatt gcggtctttg cagccctcat tgctgtgcta  
 420  
 gccgtcatcc cgccgatgtt catggtgggg gcggtccctt ttgcccttca gatggttgcc  
 480  
 gtcatgctgg cgccgatggt gctgggaagt atccgtggcg gatgcgcggg aggcttgat  
 540  
 atccttgctg gcgcgctggg gctgcccgtc ttcagcgggt ggtctagcgg gattggcgtc  
 600  
 ctgggtgggtc ccactgggtg gtatctatgg ggatgggtga tcggcgcttt cgtggcgggt  
 660

<210> 2262  
 <211> 139  
 <212> PRT  
 <213> Homo sapiens

<400> 2262  
 Met Pro Gly Gly Ser Ser Thr Ser Phe Thr Glu Arg Cys Ser Ile Gly  
 1 5 10 15  
 Pro Asn Gly Cys Pro Cys Gly Gln Pro Leu Tyr Leu Val Met Gly Arg  
 20 25 30  
 Asn Pro Met Ser Ser Arg Asn Gly Phe Gln Ala Thr Asp Leu Ala Leu  
 35 40 45  
 Ile Ala Val Phe Ala Ala Leu Ile Ala Val Leu Ala Val Ile Pro Pro  
 50 55 60  
 Met Phe Met Val Gly Ala Val Pro Phe Ala Leu Gln Met Val Ala Val  
 65 70 75 80  
 Met Leu Ala Pro Met Val Leu Gly Ser Ile Arg Gly Gly Cys Ala Val

|                         |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <b>&lt;400&gt; 2264</b> |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Xaa                     | Ala | Phe | Pro | Val | Asp | Arg | Gly | Lys | Gly | Lys | Ser | Lys | Gln | Gly | Ala |
| 1                       |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Arg                     | Ser | Pro | Arg | Ser | His | Arg | Gly | Met | Ala | Gly | Ser | Leu | Leu | Thr | Asp |
|                         |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gly                     | Val | Pro | Leu | Leu | Ile | Phe | Pro | Glu | Gly | Thr | Arg | Ser | Arg | Thr | Gly |
|                         |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ala                     | Met | Gly | Thr | Phe | Lys | Pro | Gly | Ala | Ala | Ala | Leu | Ala | Ile | Ser | Arg |
|                         | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Gly                     | Val | Pro | Val | Ile | Pro | Ile | Ala | Leu | Val | Gly | Ala | Trp | Ala | Ala | Met |
| 65                      |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     | 80  |     |
| Pro                     | Ser | Glu | Gln | Ala | Arg | Leu | Pro | Lys | Gly | Arg | Pro | Leu | Val | His | Val |
|                         |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ala                     | Ile | Gly | His | Pro | Met | Asp | Pro | Val | Pro | Gly | Glu | Ile | Ala | His | Gln |
|                         |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| phe                     | Ser | Glu | Arg | Ile | Arg | Arg | Gln | Val | Ile | Glu | Leu | His | Asp | Gln | Thr |

|                 |                         |                 |                 |         |     |     |
|-----------------|-------------------------|-----------------|-----------------|---------|-----|-----|
|                 | 115                     |                 | 120             |         | 125 |     |
| Ala Arg         | Ala Tyr Gly Met         | Pro Thr Leu Asp | Glu Tyr Gly Arg | His Arg |     |     |
|                 | 130                     |                 | 135             |         | 140 |     |
| Ala Leu Ser Gln | Ala Ser Glu Ser Gly Asp | Thr Ala Ser Thr | Asn His         |         |     |     |
| 145             |                         | 150             |                 | 155     |     | 160 |
| Ser Thr Cys     |                         |                 |                 |         |     |     |

<210> 2265  
 <211> 328  
 <212> DNA  
 <213> Homo sapiens

<400> 2265  
 ccattgggaat aggcccaacac ggatggatct actgtataac ttgcctgccca tcaggaaaga  
 60  
 gtcaacacgg cagacacatg ctggcagaaa ccctgctgga gttgccctg agcattgatg  
 120  
 cataccaccc gagaggagga gaggggtggtg ggagaaatca gatcagagtt caaaatgcac  
 180  
 cggaagggt cggaaatgta agactgcacc ttgcaggaac tgtcaatgcc actaccaata  
 240  
 tcactcactt acgtcaagca cttgagagca gctgcgaaca caattctctg actcctaacc  
 300  
 ttttagcacgt gactgggacc actggaca  
 328

<210> 2266  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

|   |  |
|---|--|
| Met Gly Ile Gly Gln His Gly Trp Ile Tyr Cys Ile Thr Cys Leu Pro |  |
| 1 5 10 15   |  |
| Ser Gly Lys Ser Gln His Gly Arg His Met Leu Ala Glu Thr Leu Leu |  |
| 20 25 30  |  |
| Glu Leu Pro Leu Ser Ile Asp Ala Tyr His Pro Arg Gly Gly Glu Gly |  |
| 35 40 45  |  |
| Gly Gly Arg Asn Gln Ile Arg Val Gln Asn Ala Pro Glu Gly Leu Gly |  |
| 50 55 60  |  |
| Asn Val Arg Leu His Leu Ala Gly Thr Val Asn Ala Thr Thr Asn Ile |  |
| 65 70 75 80   |  |
| Thr His Leu Arg Gln Ala Leu Glu Ser Ser Cys Glu His Asn Ser Leu |  |
| 85 90 95  |  |
| Thr Pro Asn Leu   |  |
| 100   |  |

<210> 2267  
 <211> 370  
 <212> DNA  
 <213> Homo sapiens

<400> 2267

agatctatgc aggtagcgct ggtctccggg gggttaagttg tccactccct gtcagatggc  
 60  
 agaccatgga gggctaatagc aggctgggaa ggctaggcag agttcccaga aacagggtcac  
 120  
 cgagggagcc accactgaat tgcactctcg ctggggagtt aagccatata cccctaagac  
 180  
 agcagtgacc ggagtggcca atctgtacag ggacaggctc aaggccacag caactcaggg  
 240  
 gacagagatg gtgaagcagg catgtcctaa agcctccctt cttaaccctg accttgaagg  
 300  
 acaggaaaca agtcatttac gtatgttgta ggcctagagc aagggattgc agagatggg  
 360  
 gtcaacgcgt  
 370

<210> 2268  
 <211> 91  
 <212> PRT  
 <213> Homo sapiens

<400> 2268  
 Met Ala Asp His Gly Gly Leu Met Gln Ala Gly Lys Ala Arg Gln Ser  
 1 5 10 15  
 Ser Gln Lys Gln Val Thr Glu Gly Ala Thr Thr Glu Leu His Ser Arg  
 20 25 30  
 Trp Gly Val Lys Pro Tyr Pro Pro Lys Thr Ala Val Thr Gly Val Ala  
 35 40 45  
 Asn Leu Tyr Arg Asp Arg Leu Lys Ala Thr Ala Thr Gln Gly Thr Glu  
 50 55 60  
 Met Val Lys Gln Ala Cys Pro Lys Ala Ser Leu Leu Asn Pro Asp Leu  
 65 70 75 80  
 Glu Gly Gln Glu Thr Ser His Leu Arg Met Leu  
 85 90

<210> 2269  
 <211> 507  
 <212> DNA  
 <213> Homo sapiens

<400> 2269  
 ctctccgacc gcgtcaaccc cggcaatatc cgcaagttcg acgaccagat cgaatcgatt  
 60  
 tgtaaggctg ccaccgagca cggtagcagc atccgaatcg gcgtgaatgc tgggtctctc  
 120  
 gacaaacgtc tgcttgacaa atacggagcc cggaccgccg aggctatggt ggagtccgca  
 180  
 ctgtgggagg ccagcctctt tgagcaatac ggattccggg atttcaaaat ctcggtgaag  
 240  
 caccacgacc cggtcgtcat gatccgtgcc tatgaacagc tcgccgcca atgcgattat  
 300  
 ccccttcatt tgggcgttac tgaggctggt ccggccttcc aaggcaccat caagtcggcg  
 360  
 gtggccttcg ggcattctct tgccgagggt atcggcgata ccatacgcgt ctccttgctg  
 420

gctgatccgg tcgaggaagt caaggtgggt atcaagatcc tggagtcgct caacctacgt  
 480  
 cctcgagggtc tagagatcgt ctctctgc  
 507

<210> 2270  
 <211> 169  
 <212> PRT  
 <213> Homo sapiens

<400> 2270  
 Leu Ser Asp Arg Val Asn Pro Gly Asn Ile Arg Lys Phe Asp Asp Gln  
 1 5 10 15  
 Ile Glu Ser Ile Cys Lys Ala Ala Thr Glu His Gly Thr Ser Ile Arg  
 20 25 30  
 Ile Gly Val Asn Ala Gly Ser Leu Asp Lys Arg Leu Leu Asp Lys Tyr  
 35 40 45  
 Gly Ala Pro Thr Ala Glu Ala Met Val Glu Ser Ala Leu Trp Glu Ala  
 50 55 60  
 Ser Leu Phe Glu Gln Tyr Gly Phe Arg Asp Phe Lys Ile Ser Val Lys  
 65 70 75 80  
 His His Asp Pro Val Val Met Ile Arg Ala Tyr Glu Gln Leu Ala Ala  
 85 90 95  
 Lys Cys Asp Tyr Pro Leu His Leu Gly Val Thr Glu Ala Gly Pro Ala  
 100 105 110  
 Phe Gln Gly Thr Ile Lys Ser Ala Val Ala Phe Gly His Leu Leu Ala  
 115 120 125  
 Glu Gly Ile Gly Asp Thr Ile Arg Val Ser Leu Ser Ala Asp Pro Val  
 130 135 140  
 Glu Glu Val Lys Val Gly Ile Lys Ile Leu Glu Ser Leu Asn Leu Arg  
 145 150 155 160  
 Pro Arg Gly Leu Glu Ile Val Ser Cys  
 165

<210> 2271  
 <211> 573  
 <212> DNA  
 <213> Homo sapiens

<400> 2271  
 nncgccgacc cggacttcca ggagatgtta cgtgcgctgg tggacttcga cgaagacatc  
 60  
 ccgatggtcg acgaaagcct ggaacagttc gcccagttgc tcaaaacccg cacctcggaa  
 120  
 gaaggcatgg cgccgttgac ctccggacgcg gtggcgcggt tggccactta cagcgcacgg  
 180  
 ctggcgggacc accaagggcg tgtgtccgcg cgcattggcg acttggtcca actggtcagc  
 240  
 gagggcgact ttatccgcca cctggcgggc gacgagatga ctgatgccgg ccatatcgaa  
 300  
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<210> 2272  
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 <212> PRT  
 <213> Homo sapiens

<400> 2272  
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 35 40 45  
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 50 55 60  
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 65 70 75 80  
 Glu Ala Asp Phe Ile Arg His Leu Ala Gly Asp Glu Met Thr Asp Ala  
 85 90 95  
 Gly His Ile Glu Arg Ala Leu Lys Ala Lys Ala Thr Arg Thr Gly Arg  
 100 105 110  
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 115 120 125  
 Asp Thr Ala Gly Ala Ala Val Gly Lys Cys Asn Gly Leu Thr Val Leu  
 130 135 140  
 Glu Val Gly Asp Ser Ala Phe Gly Val Pro Ala Arg Ile Ser Ala Thr  
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<210> 2273  
 <211> 4355  
 <212> DNA  
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1920



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<210> 2274

<211> 158

<212> PRT

<213> Homo sapiens

<400> 2274

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Phe | Gln | His | Ala | Ser | Gly | Phe | Leu | Gly | Glu | His | Ser | Pro | Gly | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Gln | Arg | Ser | Cys | Arg | Gly | Gly | Leu | Ser | Leu | Glu | Arg | Leu | Pro | Asn | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ile | Ala | Ser | Arg | Phe | Arg | Leu | Thr | Glu | Arg | Glu | Glu | Val | Ile | Thr |     |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Cys | Phe | Glu | Arg | Ala | Ser | Trp | Ile | Ala | Gln | Val | Phe | Leu | Gln | Glu | Leu |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Glu | Lys | Thr | Thr | Asn | Asn | Ser | Thr | Ser | Arg | His | Leu | Lys | Gly | Cys | His |
|     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Pro | Leu | Asp | Tyr | Glu | Leu | Thr | Tyr | Phe | Leu | Glu | Ala | Ala | Leu | Gln | Ser |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Ala | Tyr | Val | Lys | Asn | Leu | Lys | Lys | Gly | Asn | Ile | Val | Lys | Gly | Met | Arg |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Glu | Leu | Arg | Glu | Val | Leu | Arg | Thr | Val | Glu | Thr | Lys | Ala | Thr | Gln | Asn |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Phe | Lys | Val | Met | Ala | Ala | Lys | His | Leu | Ala | Gly | Val | Leu | Leu | His | Ser |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Leu | Ser | Gly | Val | Leu | Leu | Glu | Pro | Pro | Val | Pro | Pro | Ser | Ala |     |     |

145

150

155

&lt;210&gt; 2275

&lt;211&gt; 608

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2275

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 608

&lt;210&gt; 2276

&lt;211&gt; 167

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2276

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Thr | Asn | Asn | Thr | Lys | Glu | Asn | Arg | Arg | Pro | Gln | Lys | Glu | Glu | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Gly | Cys | Ala | Pro | Thr | Phe | Phe | Pro | Asn | Gln | Ser | Ser | Gly | Phe | Thr | Thr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Pro | Thr | Ala | Met | Thr | Pro | Pro | Val | Leu | Thr | Thr | Ala | Glu | Thr | Ser | Val |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Lys | Pro | Ser | Val | Ser | Ala | Phe | Thr | His | Ser | Pro | Pro | Glu | Asn | Thr | Thr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Gly | Ile | Ser | Ser | Thr | Ile | Ser | Phe | His | Ser | Arg | Thr | Leu | Asn | Leu | Thr |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Asp | Val | Ile | Glu | Glu | Leu | Ala | Gln | Ala | Ser | Thr | Gln | Thr | Leu | Lys | Ser |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Thr | Ile | Ala | Ser | Glu | Thr | Thr | Leu | Ser | Ser | Lys | Ser | His | Gln | Ser | Thr |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Thr | Thr | Arg | Lys | Ala | Ile | Ile | Arg | His | Ser | Thr | Ile | Pro | Pro | Phe | Leu |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Ser | Ser | Ser | Ala | Thr | Leu | Ile | Pro | Val | Pro | Ile | Ser | Pro | Pro | Phe | Thr |

130                      135                      140  
 Gln Arg Ala Val Thr Asp Asn Val Ala Thr Pro Ile Ser Gly Leu Met  
 145                      150                      155                      160  
 Thr Asn Thr Val Val Lys Leu  
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<210> 2277  
 <211> 640  
 <212> DNA  
 <213> Homo sapiens

<400> 2277  
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 gctggcatgg gccgttcttc ccctgggact gcacagcctg gaccnccac caagtcctgt  
 240  
 tgcccaccct ggctcagetc tctccagcc gcatgcctgc ctctctccct ctttcccca  
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 540  
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<210> 2278  
 <211> 95  
 <212> PRT  
 <213> Homo sapiens

<400> 2278  
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 Gly Arg Ser Ser Pro Gly Thr Ala Gln Pro Gly Pro Xaa Thr Lys Ser  
                          20                      25                      30  
 Cys Cys Pro Pro Trp Leu Ser Ser Pro Pro Ala Ala Cys Leu Pro Ser  
                          35                      40                      45  
 Ser Leu Leu Ser Pro Tyr Pro Val Leu Pro Ser Pro Ser Cys Lys Val  
                          50                      55                      60  
 His Ala Thr Pro Gln Glu Glu Pro Gln Arg Leu Ser Ser Asp Pro Thr  
 65                      70                      75                      80  
 Leu Ser Ala Pro Thr Leu Pro Pro His Gln Ile Leu Ser Thr Pro  
                          85                      90                      95

<210> 2279  
 <211> 331  
 <212> DNA  
 <213> Homo sapiens

<400> 2279  
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 120  
 ttccggacca gggggatgca caggggcaa gagaatgcat ggaatcagag ggcactggcc  
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 240  
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 331

<210> 2280  
 <211> 91  
 <212> PRT  
 <213> Homo sapiens

<400> 2280  
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 Glu Cys Met Glu Ser Glu Gly Thr Gly Pro Thr His Ser Pro Ser Ser  
 35 40 45  
 Pro Ala Val Leu Phe Ser Phe Leu His Cys Ala Phe Val Ser Phe Leu  
 50 55 60  
 Gly Thr Ser Phe Thr Pro Ala Cys Ile Ser Ser Leu Ser His Gly Ser  
 65 70 75 80  
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 85 90

<210> 2281  
 <211> 409  
 <212> DNA  
 <213> Homo sapiens

<400> 2281  
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 120  
 gatgacaaat tcaagcattg ccacagaaaa ttttcctgct gtcagttctc ccacccaact  
 180  
 gataatgaag ccaggctctg aatgggatgg ctctaccca agtgaggact cccgaggtag  
 240  
 ctttgtgcca gatattttac atggcaactt tcaagagggt gggcagctgg cctctgccgc  
 300

gcctgacttg tggatagatg ctaagaagcc cttcagtttg aaagcagatg gtgagaatcc  
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 409

<210> 2282  
 <211> 96  
 <212> PRT  
 <213> Homo sapiens

<400> 2282  
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 Pro Thr Gln Leu Ile Met Lys Pro Gly Ser Glu Trp Asp Gly Ser Thr  
 20 25 30  
 Pro Ser Glu Asp Ser Arg Gly Thr Phe Val Pro Asp Ile Leu His Gly  
 35 40 45  
 Asn Phe Gln Glu Gly Gly Gln Leu Ala Ser Ala Ala Pro Asp Leu Trp  
 50 55 60  
 Ile Asp Ala Lys Lys Pro Phe Ser Leu Lys Ala Asp Gly Glu Asn Pro  
 65 70 75 80  
 Asp Ile Leu Thr His Cys Glu His Asp Tyr Gly Glu Thr Thr Thr Arg  
 85 90 95

<210> 2283  
 <211> 404  
 <212> DNA  
 <213> Homo sapiens

<400> 2283  
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 120  
 ccgacaattt ctagttaaatt ccgacgaaag tttattgtaa aatactctgc aacctctttt  
 180  
 ctgctctgcc atctgggtgg gggttgcaac tttccacatc actgtcgagt gcttcgtaac  
 240  
 cgtcttcaac cctgtcatcg ttcttctcag ttgcaccaag cttttggacg tgcggtgata  
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 360  
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 404

<210> 2284  
 <211> 122  
 <212> PRT  
 <213> Homo sapiens

<400> 2284  
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 His Leu Leu Val Val Phe Phe Leu Val Gly Ala Val Pro Thr Ile Ser

<400> 2285  
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240  
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&lt;210&gt; 2286

&lt;211&gt; 1784

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2286

Pro Val Pro Ala Met Pro Gly Gly Pro Ser Pro Arg Ser Pro Ala Pro  
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 Pro Gly Pro Ala Pro Gly Arg Ala Thr Glu Gly Arg Ala Ala Leu Asp  
 35 40 45  
 Ile Val His Pro Val Arg Val Asp Ala Gly Gly Ser Phe Leu Ser Tyr  
 50 55 60  
 Glu Leu Trp Pro Arg Ala Leu Arg Lys Arg Asp Val Ser Val Arg Arg  
 65 70 75 80  
 Asp Ala Pro Ala Phe Tyr Glu Leu Gln Tyr Arg Gly Arg Glu Leu Arg  
 85 90 95  
 Phe Asn Leu Thr Ala Asn Gln His Leu Leu Ala Pro Gly Phe Val Ser  
 100 105 110  
 Glu Thr Arg Arg Arg Gly Gly Leu Gly Arg Ala His Ile Arg Ala His  
 115 120 125  
 Thr Pro Ala Cys His Leu Leu Gly Glu Val Gln Asp Pro Glu Leu Glu  
 130 135 140  
 Gly Gly Leu Ala Ala Ile Ser Ala Cys Asp Gly Leu Lys Gly Val Phe  
 145 150 155 160  
 Gln Leu Ser Asn Glu Asp Tyr Phe Ile Glu Pro Leu Asp Ser Ala Pro  
 165 170 175  
 Ala Arg Pro Gly His Ala Gln Pro His Val Val Tyr Lys Arg Gln Ala  
 180 185 190  
 Pro Glu Arg Leu Ala Gln Arg Gly Asp Ser Ser Ala Pro Ser Thr Cys

|   |     |     |
|---|-----|-----|
| 195   | 200 | 205 |
| Ser Ala Ser Val Pro Arg Ala Gly Val Ser Thr Gly Ala Leu Gly Ala |     |     |
| 210   | 215 | 220 |
| Ala Ala Ala Val Ala Ala Ala Thr Ala Arg Arg Leu His Gln Arg Ser |     |     |
| 225   | 230 | 235 |
| Val Ser Lys Glu Lys Trp Val Glu Thr Leu Val Val Ala Asp Ala Lys |     |     |
| 245   | 250 | 255 |
| Met Val Glu Tyr His Gly Gln Pro Gln Val Glu Ser Tyr Val Leu Thr |     |     |
| 260   | 265 | 270 |
| Ile Met Asn Met Val Ala Gly Leu Phe His Asp Pro Ser Ile Gly Asn |     |     |
| 275   | 280 | 285 |
| Pro Ile His Ile Thr Ile Val Arg Leu Val Leu Leu Glu Asp Glu Glu |     |     |
| 290   | 295 | 300 |
| Glu Asp Leu Lys Ile Thr His His Ala Asp Asn Thr Leu Lys Ser Phe |     |     |
| 305   | 310 | 315 |
| Cys Lys Trp Gln Lys Ser Ile Asn Met Lys Gly Asp Ala His Pro Leu |     |     |
| 325   | 330 | 335 |
| His His Asp Thr Ala Ile Leu Leu Thr Arg Lys Asp Leu Cys Ala Ala |     |     |
| 340   | 345 | 350 |
| Met Asn Arg Pro Cys Glu Thr Leu Gly Leu Ser His Val Ala Gly Met |     |     |
| 355   | 360 | 365 |
| Cys Gln Pro His Arg Ser Cys Ser Ile Asn Glu Asp Thr Gly Leu Pro |     |     |
| 370   | 375 | 380 |
| Leu Ala Phe Thr Val Ala His Glu Leu Gly His Ser Phe Gly Ile Gln |     |     |
| 385   | 390 | 395 |
| His Asp Gly Ser Gly Asn Asp Cys Glu Pro Val Gly Lys Arg Pro Phe |     |     |
| 405   | 410 | 415 |
| Ile Met Ser Pro Gln Leu Leu Tyr Asp Ala Ala Pro Leu Thr Trp Ser |     |     |
| 420   | 425 | 430 |
| Arg Cys Ser Arg Gln Tyr Ile Thr Arg Phe Leu Asp Arg Gly Trp Gly |     |     |
| 435   | 440 | 445 |
| Leu Cys Leu Asp Asp Pro Pro Ala Lys Asp Ile Ile Asp Phe Pro Ser |     |     |
| 450   | 455 | 460 |
| Val Pro Pro Gly Val Leu Tyr Asp Val Ser His Gln Cys Arg Leu Gln |     |     |
| 465   | 470 | 475 |
| Tyr Gly Ala Tyr Ser Ala Phe Cys Glu Asp Met Asp Asn Val Cys His |     |     |
| 485   | 490 | 495 |
| Thr Leu Trp Cys Ser Val Gly Thr Thr Cys His Ser Lys Leu Asp Ala |     |     |
| 500   | 505 | 510 |
| Ala Val Asp Gly Thr Arg Cys Gly Glu Asn Lys Trp Cys Leu Ser Gly |     |     |
| 515   | 520 | 525 |
| Glu Cys Val Pro Val Gly Phe Arg Pro Glu Ala Val Asp Gly Gly Trp |     |     |
| 530   | 535 | 540 |
| Ser Gly Trp Ser Ala Trp Ser Ile Cys Ser Arg Ser Cys Gly Met Gly |     |     |
| 545   | 550 | 555 |
| Val Gln Ser Ala Glu Arg Gln Cys Thr Gln Pro Thr Pro Lys Tyr Lys |     |     |
| 565   | 570 | 575 |
| Gly Arg Tyr Cys Val Gly Glu Arg Lys Arg Phe Arg Leu Cys Asn Leu |     |     |
| 580   | 585 | 590 |
| Gln Ala Cys Pro Ala Gly Arg Pro Ser Phe Arg His Val Gln Cys Ser |     |     |
| 595   | 600 | 605 |
| His Phe Asp Ala Met Leu Tyr Lys Gly Gln Leu His Thr Trp Val Pro |     |     |
| 610   | 615 | 620 |
| Val Val Asn Asp Val Asn Pro Cys Glu Leu His Cys Arg Pro Ala Asn |     |     |

|      |      |     |     |      |      |      |      |     |      |      |      |      |     |      |      |
|------|------|-----|-----|------|------|------|------|-----|------|------|------|------|-----|------|------|
| 625  |      |     |     |      | 630  |      |      |     |      | 635  |      |      |     | 640  |      |
| Glu  | Tyr  | Phe | Ala | Lys  | Lys  | Leu  | Arg  | Asp | Ala  | Val  | Val  | Asp  | Gly | Thr  | Pro  |
|      |      |     |     | 645  |      |      |      |     | 650  |      |      |      |     | 655  |      |
| Cys  | Tyr  | Gln | Val | Arg  | Ala  | Ser  | Arg  | Asp | Leu  | Cys  | Ile  | Asn  | Gly | Ile  | Cys  |
|      |      |     | 660 |      |      |      |      | 665 |      |      |      |      | 670 |      |      |
| Lys  | Asn  | Val | Gly | Cys  | Asp  | Phe  | Glu  | Ile | Asp  | Ser  | Gly  | Ala  | Met | Glu  | Asp  |
|      |      | 675 |     |      |      |      | 680  |     |      |      |      | 685  |     |      |      |
| Arg  | Cys  | Gly | Val | Cys  | His  | Gly  | Asn  | Gly | Ser  | Thr  | Cys  | His  | Thr | Val  | Ser  |
|      | 690  |     |     |      |      | 695  |      |     |      |      | 700  |      |     |      |      |
| Gly  | Thr  | Phe | Xaa | Arg  | Arg  | Pro  | Arg  | Val | Xaa  | Gly  | Tyr  | Val  | Asp | Val  | Gly  |
| 705  |      |     |     |      | 710  |      |      |     |      | 715  |      |      |     |      | 720  |
| Leu  | Ile  | Pro | Ala | Gly  | Ala  | Arg  | Glu  | Ile | Arg  | Ile  | Gln  | Glu  | Val | Ala  | Glu  |
|      |      |     |     | 725  |      |      |      |     | 730  |      |      |      |     | 735  |      |
| Ala  | Ala  | Asn | Phe | Leu  | Ala  | Leu  | Arg  | Ser | Glu  | Asp  | Pro  | Glu  | Lys | Tyr  | Phe  |
|      |      | 740 |     |      |      |      |      | 745 |      |      |      |      | 750 |      |      |
| Leu  | Asn  | Gly | Gly | Trp  | Thr  | Ile  | Gln  | Trp | Asn  | Gly  | Asp  | Tyr  | Gln | Val  | Ala  |
|      | 755  |     |     |      |      |      | 760  |     |      |      |      | 765  |     |      |      |
| Gly  | Thr  | Thr | Phe | Thr  | Tyr  | Ala  | Arg  | Arg | Gly  | Asn  | Trp  | Glu  | Asn | Leu  | Thr  |
|      | 770  |     |     |      |      | 775  |      |     |      |      | 780  |      |     |      |      |
| Ser  | Pro  | Gly | Pro | Thr  | Lys  | Glu  | Pro  | Val | Trp  | Ile  | Gln  | Val  | Pro | Ala  | Ser  |
| 785  |      |     |     |      | 790  |      |      |     |      | 795  |      |      |     |      | 800  |
| Arg  | Gly  | Pro | Gly | Gly  | Gly  | Ser  | Arg  | Gly | Gly  | Val  | Pro  | Arg  | Pro | Ser  | Thr  |
|      |      |     |     | 805  |      |      |      |     | 810  |      |      |      |     | 815  |      |
| Leu  | His  | Gly | Arg | Ser  | Arg  | Pro  | Gly  | Gly | Val  | Ser  | Pro  | Gly  | Ser | Val  | Thr  |
|      |      | 820 |     |      |      |      |      | 825 |      |      |      |      | 830 |      |      |
| Glu  | Pro  | Gly | Ser | Glu  | Pro  | Gly  | Pro  | Pro | Ala  | Ala  | Ala  | Ser  | Thr | Ser  | Val  |
|      |      | 835 |     |      |      |      | 840  |     |      |      |      | 845  |     |      |      |
| Ser  | Pro  | Ser | Leu | Lys  | Trp  | Pro  | Asn  | Leu | Val  | Ala  | Ala  | Val  | His | Arg  | Gly  |
|      | 850  |     |     |      |      | 855  |      |     |      |      | 860  |      |     |      |      |
| Gly  | Trp  | Gly | Gln | Ala  | Pro  | Leu  | Gly  | Leu | Gly  | Gly  | Trp  | Arg  | Arg | His  | Leu  |
| 865  |      |     |     |      | 870  |      |      |     |      | 875  |      |      |     |      | 880  |
| Val  | Leu  | Met | Gly | Pro  | Arg  | Leu  | Pro  | Thr | Gln  | Leu  | Leu  | Phe  | Gln | Glu  | Ser  |
|      |      |     |     | 885  |      |      |      |     | 890  |      |      |      |     | 895  |      |
| Asn  | Pro  | Gly | Val | His  | Tyr  | Glu  | Tyr  | Thr | Ile  | His  | Arg  | Glu  | Ala | Gly  | Gly  |
|      |      | 900 |     |      |      |      |      | 905 |      |      |      |      | 910 |      |      |
| His  | Asp  | Glu | Val | Pro  | Pro  | Pro  | Val  | Phe | Ser  | Trp  | His  | Tyr  | Gly | Pro  | Trp  |
|      | 915  |     |     |      |      |      | 920  |     |      |      |      | 925  |     |      |      |
| Thr  | Lys  | Cys | Thr | Val  | Thr  | Cys  | Gly  | Arg | Gly  | Val  | Gln  | Arg  | Gln | Asn  | Val  |
|      | 930  |     |     |      |      | 935  |      |     |      |      | 940  |      |     |      |      |
| Tyr  | Cys  | Leu | Glu | Arg  | Gln  | Ala  | Gly  | Pro | Val  | Asp  | Glu  | Glu  | His | Cys  | Asp  |
| 945  |      |     |     |      | 950  |      |      |     |      | 955  |      |      |     |      | 960  |
| Pro  | Leu  | Gly | Arg | Pro  | Asp  | Asp  | Gln  | Gln | Arg  | Lys  | Cys  | Ser  | Glu | Gln  | Pro  |
|      |      |     |     | 965  |      |      |      |     | 970  |      |      |      |     | 975  |      |
| Cys  | Pro  | Ala | Arg | Trp  | Trp  | Ala  | Gly  | Glu | Trp  | Gln  | Leu  | Cys  | Ser | Ser  | Ser  |
|      |      | 980 |     |      |      |      |      | 985 |      |      |      |      | 990 |      |      |
| Cys  | Gly  | Pro | Gly | Gly  | Leu  | Ser  | Arg  | Arg | Ala  | Val  | Leu  | Cys  | Ile | Arg  | Ser  |
|      | 995  |     |     |      |      |      | 1000 |     |      |      |      | 1005 |     |      |      |
| Val  | Gly  | Leu | Asp | Glu  | Gln  | Ser  | Ala  | Leu | Glu  | Pro  | Pro  | Ala  | Cys | Glu  | His  |
|      | 1010 |     |     |      |      | 1015 |      |     |      |      | 1020 |      |     |      |      |
| Leu  | Pro  | Arg | Pro | Pro  | Thr  | Glu  | Thr  | Pro | Cys  | Asn  | Arg  | His  | Val | Pro  | Cys  |
| 1025 |      |     |     |      | 1030 |      |      |     |      | 1035 |      |      |     |      | 1040 |
| Pro  | Ala  | Thr | Trp | Ala  | Val  | Gly  | Asn  | Trp | Ser  | Gln  | Cys  | Ser  | Val | Thr  | Cys  |
|      |      |     |     | 1045 |      |      |      |     | 1050 |      |      |      |     | 1055 |      |
| Gly  | Glu  | Gly | Thr | Gln  | Arg  | Arg  | Asn  | Val | Leu  | Cys  | Thr  | Asn  | Asp | Thr  | Gly  |

|   |      |      |
|---|------|------|
| 1060  | 1065 | 1070 |
| Val Pro Cys Asp Glu Ala Gln Gln Pro Ala Ser Glu Val Thr Cys Ser |      |      |
| 1075  | 1080 | 1085 |
| Leu Pro Leu Cys Arg Trp Pro Leu Gly Thr Leu Gly Pro Glu Gly Ser |      |      |
| 1090  | 1095 | 1100 |
| Gly Ser Gly Ser Ser Ser His Glu Leu Phe Asn Glu Ala Asp Phe Ile |      |      |
| 1105  | 1110 | 1115 |
| Pro His His Leu Ala Pro Arg Pro Ser Pro Ala Ser Ser Pro Lys Pro |      |      |
| 1125  | 1130 | 1135 |
| Gly Thr Met Gly Asn Ala Ile Glu Glu Glu Ala Pro Glu Leu Asp Leu |      |      |
| 1140  | 1145 | 1150 |
| Pro Gly Pro Val Phe Val Asp Asp Phe Tyr Tyr Asp Tyr Asn Phe Ile |      |      |
| 1155  | 1160 | 1165 |
| Asn Phe His Glu Asp Leu Ser Tyr Gly Pro Ser Glu Glu Pro Asp Leu |      |      |
| 1170  | 1175 | 1180 |
| Asp Leu Ala Gly Thr Gly Asp Arg Thr Pro Pro Pro His Ser His Pro |      |      |
| 1185  | 1190 | 1195 |
| Ala Ala Pro Ser Thr Gly Ser Pro Val Pro Ala Thr Glu Pro Pro Ala |      |      |
| 1205  | 1210 | 1215 |
| Ala Lys Glu Glu Gly Val Leu Gly Pro Trp Ser Pro Ser Pro Trp Pro |      |      |
| 1220  | 1225 | 1230 |
| Ser Gln Ala Gly Arg Ser Pro Pro Pro Pro Ser Glu Gln Thr Pro Gly |      |      |
| 1235  | 1240 | 1245 |
| Asn Pro Leu Ile Asn Phe Leu Pro Glu Glu Asp Thr Pro Ile Gly Ala |      |      |
| 1250  | 1255 | 1260 |
| Pro Asp Leu Gly Leu Pro Ser Leu Ser Trp Pro Arg Val Ser Thr Asp |      |      |
| 1265  | 1270 | 1275 |
| Gly Leu Gln Thr Pro Ala Thr Pro Glu Ser Gln Asn Asp Phe Pro Val |      |      |
| 1285  | 1290 | 1295 |
| Gly Lys Asp Ser Gln Ser Gln Leu Pro Pro Pro Trp Arg Asp Arg Thr |      |      |
| 1300  | 1305 | 1310 |
| Asn Glu Val Phe Lys Asp Asp Glu Glu Pro Lys Gly Arg Gly Ala Pro |      |      |
| 1315  | 1320 | 1325 |
| His Leu Pro Pro Arg Pro Ser Ser Thr Leu Pro Pro Leu Ser Pro Val |      |      |
| 1330  | 1335 | 1340 |
| Gly Ser Thr His Ser Ser Pro Ser Pro Asp Val Ala Glu Leu Trp Thr |      |      |
| 1345  | 1350 | 1355 |
| Gly Gly Thr Val Ala Trp Glu Pro Ala Leu Glu Gly Gly Leu Gly Pro |      |      |
| 1365  | 1370 | 1375 |
| Val Asp Ser Glu Leu Trp Pro Thr Val Gly Val Ala Ser Leu Leu Pro |      |      |
| 1380  | 1385 | 1390 |
| Pro Pro Ile Ala Pro Leu Pro Glu Met Lys Val Arg Asp Ser Ser Leu |      |      |
| 1395  | 1400 | 1405 |
| Glu Pro Gly Thr Pro Ser Phe Pro Ala Pro Gly Pro Gly Ser Trp Asp |      |      |
| 1410  | 1415 | 1420 |
| Leu Gln Thr Val Ala Val Trp Gly Thr Phe Leu Pro Thr Thr Leu Thr |      |      |
| 1425  | 1430 | 1435 |
| Gly Leu Gly His Met Pro Glu Pro Ala Leu Asn Pro Gly Pro Lys Gly |      |      |
| 1445  | 1450 | 1455 |
| Gln Pro Glu Ser Leu Ser Pro Glu Val Pro Leu Ser Ser Arg Leu Leu |      |      |
| 1460  | 1465 | 1470 |
| Ser Thr Pro Ala Trp Asp Ser Pro Ala Asn Ser His Arg Val Pro Glu |      |      |
| 1475  | 1480 | 1485 |
| Thr Gln Pro Leu Ala Pro Ser Leu Ala Glu Ala Gly Pro Pro Ala Asp |      |      |

1490                      1495                      1500  
 Pro Leu Val Val Arg Asn Ala Ser Trp Gln Ala Gly Asn Trp Ser Glu  
 1505                      1510                      1515                      1520  
 Cys Ser Thr Thr Cys Gly Leu Gly Ala Val Trp Arg Pro Val Arg Cys  
                     1525                      1530                      1535  
 Ser Ser Gly Arg Asp Glu Asp Cys Ala Pro Ala Gly Arg Pro Gln Pro  
                     1540                      1545                      1550  
 Ala Arg Arg Cys His Leu Arg Pro Cys Ala Thr Trp His Ser Gly Asn  
                     1555                      1560                      1565  
 Trp Ser Lys Cys Ser Arg Ser Cys Gly Gly Gly Ser Ser Val Arg Asp  
                     1570                      1575                      1580  
 Val Gln Cys Val Asp Thr Arg Asp Leu Arg Pro Leu Arg Pro Phe His  
 1585                      1590                      1595                      1600  
 Cys Gln Pro Gly Pro Ala Lys Pro Pro Ala His Arg Pro Cys Gly Ala  
                     1605                      1610                      1615  
 Gln Pro Cys Leu Ser Trp Tyr Thr Ser Ser Trp Arg Glu Cys Ser Glu  
                     1620                      1625                      1630  
 Ala Cys Gly Gly Gly Glu Gln Gln Arg Leu Val Thr Cys Pro Glu Pro  
                     1635                      1640                      1645  
 Gly Leu Cys Glu Glu Ala Leu Arg Pro Asn Thr Thr Arg Pro Cys Asn  
                     1650                      1655                      1660  
 Thr His Pro Cys Thr Gln Trp Val Val Gly Pro Trp Gly Gln Cys Ser  
 1665                      1670                      1675                      1680  
 Ala Pro Cys Gly Gly Gly Val Gln Arg Arg Leu Val Lys Cys Val Asn  
                     1685                      1690                      1695  
 Thr Gln Thr Gly Leu Pro Glu Glu Asp Ser Asp Gln Cys Gly His Glu  
                     1700                      1705                      1710  
 Ala Trp Pro Glu Ser Ser Arg Pro Cys Gly Thr Glu Asp Cys Glu Pro  
                     1715                      1720                      1725  
 Val Glu Pro Pro Arg Cys Glu Arg Asp Arg Leu Ser Phe Gly Phe Cys  
                     1730                      1735                      1740  
 Glu Thr Leu Arg Leu Leu Gly Arg Cys Gln Leu Pro Thr Ile Arg Thr  
 1745                      1750                      1755                      1760  
 Gln Cys Cys Arg Ser Cys Ser Pro Pro Ser His Gly Ala Pro Ser Arg  
                     1765                      1770                      1775  
 Gly His Gln Arg Val Ala Arg Arg  
                     1780

&lt;210&gt; 2287

&lt;211&gt; 750

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2287

tgacacaggt tatttctctt tggttaaata tcttacaagt ctttttttaa tcttcacttc  
 60  
 tggcctataa aagtatcatc atccccattt tacagaatgg gaaagtaagg cgtggggagg  
 120  
 ttgaggacat ttgtacagag tcaggtaact ggaggaactg gactacaacc ctgctcagtg  
 180  
 cagccagtgt gactgagcgc ctctgagag ccagggtggat tctgccctca aggatccatg  
 240  
 ctctgggcaa gaaacccacc catcagcagg tggcttctgc tgagccacaa caggcacaca  
 300

gaggggtcca tgggagccca gaggggagca tctgaccagg ctcaggggaa ggaatgtgtc  
 360  
 cagcagagtc acagaggagc agtatgagtt agccaggtag gggacattcc aggcagggga  
 420  
 gcagcaggac aaaagcatag aggtagcact gccagtgccca agttccaaaa taagaggctg  
 480  
 actgctacag ggtccatata ggaaaataat gggaaataca tttggacagg aggtggggtc  
 540  
 tgtaacaaag gactttaatt ccaggttaag gaatctggat gttaaaacaa cattagctgc  
 600  
 catttctaca gtgctacttc ccaggctctg tgcctttctg ggagccttga aggtttgtga  
 660  
 gctggaagga gatattagga acaaaacgat gcatgaggat agctcaggtg aaggttattg  
 720  
 ataagtaaga atgcctggca ccaaacgcgt  
 750

<210> 2288  
 <211> 142  
 <212> PRT  
 <213> Homo sapiens

<400> 2288  
 Met Ala Ala Asn Val Val Leu Thr Ser Arg Phe Leu Asn Leu Glu Leu  
 1 5 10 15  
 Lys Ser Phe Val Thr Asp Pro Thr Ser Cys Pro Asn Val Phe Pro Ile  
 20 25 30  
 Ile Phe Leu Tyr Gly Pro Cys Ser Ser Gln Pro Leu Ile Leu Glu Leu  
 35 40 45  
 Gly Thr Gly Ser Ala Thr Ser Met Leu Leu Ser Cys Cys Ser Pro Ala  
 50 55 60  
 Trp Asn Val Pro Tyr Leu Ala Asn Ser Tyr Cys Ser Ser Val Thr Leu  
 65 70 75 80  
 Leu Asp Thr Phe Leu Pro Leu Ser Leu Val Arg Cys Ser Pro Leu Gly  
 85 90 95  
 Ser His Gly Pro Leu Cys Val Pro Val Val Ala Gln Gln Lys Pro Pro  
 100 105 110  
 Ala Asp Gly Trp Val Ser Cys Pro Glu His Gly Ser Leu Arg Ala Glu  
 115 120 125  
 Ser Thr Trp Leu Ser Gly Gly Ala Gln Ser His Trp Leu His  
 130 135 140

<210> 2289  
 <211> 381  
 <212> DNA  
 <213> Homo sapiens

<400> 2289  
 caggacgcgg cctcggcggg gcccgggccg aacggctgcg gacacctggg cgccgaggag  
 60  
 ccgagcgccg ccgcctccgg catggatcat tgcgtgacgg tggagcgca gctggagaag  
 120  
 gtgctgcaca agttctcggg ctacgggcag ctgtgcgagc gcggcctgga ggagctcatc  
 180



gactacaccg gcggtctcaa gcaccagatc ctgcagagcc acggccaaga tgctgaatta  
 240  
 tcagggacac tttcacttgt tttgacacag ggctgtaaaa gaataanaag gggatactgg  
 300  
 ttcaaaaatt ggctccgac cacaagaca tccacagcag tgtttctcgg gttggaaaag  
 360  
 ccattgatga ggattcactt t  
 381

<210> 2290  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 2290  
 Met Asp His Cys Val Thr Val Glu Arg Glu Leu Glu Lys Val Leu His  
 1 5 10 15  
 Lys Phe Ser Gly Tyr Gly Gln Leu Cys Glu Arg Gly Leu Glu Glu Leu  
 20 25 30  
 Ile Asp Tyr Thr Gly Gly Leu Lys His Gln Ile Leu Gln Ser His Gly  
 35 40 45  
 Gln Asp Ala Glu Leu Ser Gly Thr Leu Ser Leu Val Leu Thr Gln Gly  
 50 55 60  
 Cys Lys Arg Ile Xaa Arg Gly Tyr Trp Phe Lys Asn Trp Pro Pro Thr  
 65 70 75 80  
 Thr Lys Thr Ser Thr Ala Val Phe Leu Gly Leu Glu Lys Pro Leu Met  
 85 90 95  
 Arg Ile His Phe  
 100

<210> 2291  
 <211> 573  
 <212> DNA  
 <213> Homo sapiens

<400> 2291  
 gcatgctcta ccgcaaagtc gggccccac cgattaaaaa tgcccgggtc gaggacagcc  
 60  
 ttcggcagca ccgactcatt atcggcaccg acctagtcaa ttgccaccac ctgcttatgc  
 120  
 aagtggtcga tagaagcccc agccggctta agccagttct ggaaaaccac cacatatcgc  
 180  
 acatgttcgt tgtgacgatg cagctgagcc attgaatcga cggtcagcgc catgaacgcc  
 240  
 cgatgctcgt tgacggtaag actcgccgac ccagcaacgt cggcggttgt cgtgccctca  
 300  
 tcggtgtaat ggcgacgagc gacgatgacg tcatgtccgc cggcaaagaa ggctgcgga  
 360  
 gcctcgcgta attcttgggg accgaggtcc tcggcgcgcc ggtctgaccc caccgccttg  
 420  
 aacttggcgt taaggaccga cctcacgtga gcctcccctg acggggttaga caggatttcc  
 480  
 tcctgccagt cccgcgctgc ccgaggcaag ctcatccccc agttgagctg ccaataccgc  
 540

cacgacagga tctcgaaaag attggggacg cgt  
573

<210> 2292  
<211> 140  
<212> PRT  
<213> Homo sapiens

<400> 2292  
Met Ser Leu Pro Arg Ala Ala Arg Asp Trp Gln Glu Glu Tyr Leu Ser  
1 5 10 15  
Asn Pro Ser Gly Glu Ala His Val Arg Ser Val Leu Asn Ala Lys Phe  
20 25 30  
Lys Ala Val Gly Ser Asp Arg Arg Ala Glu Asp Leu Gly Pro Gln Glu  
35 40 45  
Leu Arg Glu Ala Ser Ala Ala Phe Phe Ala Gly Gly His Asp Val Ile  
50 55 60  
Val Ala Arg Arg His Tyr Thr Asp Glu Gly Thr Thr Thr Ala Asp Val  
65 70 75 80  
Ala Gly Ser Ala Ser Leu Thr Val Asn Glu His Arg Ala Phe Met Ala  
85 90 95  
Leu Thr Val Asp Ser Met Ala Gln Leu His Arg His Asn Glu His Val  
100 105 110  
Arg Tyr Val Val Val Phe Gln Asn Trp Leu Lys Pro Ala Gly Ala Ser  
115 120 125  
Ile Asp His Leu His Lys Gln Val Val Ala Ile Asp  
130 135 140

<210> 2293  
<211> 358  
<212> DNA  
<213> Homo sapiens

<400> 2293  
acgcgtgaag gaatggaagc tgctctcgtc ggtgcacaca agactggcgg gtgcccattg  
60  
gtgaacactg tcgctaagaa ctgggtgaac cggtcaca cgccggatat gaaaccact  
120  
gaggagatca agcggcagtt ccaaggtctg cattgggttg gacgtaagta tgggctcaac  
180  
cacggagagt tctatcttga cgacgagcag tgggccacgc tcatggccgg gtctcttttc  
240  
gaggcgaatc cgcgcatata gagcaacttt gattccgagg gcgctgttgt ggatccggat  
300  
tccgattcac ttgctggggc tgatcgagat gcccgaggtg cttcggatgc atgccttc  
358

<210> 2294  
<211> 115  
<212> PRT  
<213> Homo sapiens

<400> 2294  
Met Glu Ala Ala Leu Val Gly Ala His Lys Thr Gly Gly Cys Pro Leu

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      1           5           10           15
Val Asn Thr Val Ala Lys Asn Trp Leu Asn Arg Leu Asn Thr Pro Asp
      20           25           30
Met Lys Pro Thr Glu Glu Ile Lys Arg Gln Phe Gln Gly Leu His Trp
      35           40           45
Leu Gly Arg Lys Tyr Gly Leu Asn His Gly Glu Phe Tyr Leu Asp Asp
      50           55           60
Glu Gln Trp Ala Thr Leu Met Ala Gly Ser Ser Phe Glu Ala Asn Pro
      65           70           75           80
Arg Ile Lys Ser Asn Phe Asp Ser Glu Gly Ala Val Val Asp Pro Asp
      85           90           95
Ser Asp Ser Leu Ala Gly Ala Asp Arg Asp Ala Arg Gly Ala Ser Asp
      100          105          110
Ala Cys Leu
      115

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<210> 2295  
 <211> 546  
 <212> DNA  
 <213> Homo sapiens

```

<400> 2295
ggcaccgatc cgagtgggtgg tgccgggatt aggnccggatc tanaaacatt ctccgcctt
60
ggggcgatatg gctgctcggg cattaccgca ctggtagcgc aaaatacgcg cggcgtgcag
120
tcggtgtatc gtatcgaacc ggattttgtc ggtgcacaac tggactctgt gttcagcgat
180
gtccgcattg attccaccaa aatcggcatg ctggcagagg cggatatcgt ggaagcggtc
240
gcggagcgcc tcaaacatta tcgcgttaaa aacgtggtag ttgatacggg gatgctggcg
300
aaaagtggcg atccgctgct atctcctgct gctgtcgaaa ctctgcgaaa acaccttctg
360
ccacacgtcg cgctgatcac gccaaatttg ccggaggcgg cggcgctgct ggatgcgcct
420
catgcccgta ccgagcacga gatgaaagag caggggcgcg cacttctggc gcttggctgc
480
gaggcagtgc tgatgaaagg cggccatctt gacgatcctg agagcccgga ctggctcttc
540
acgcgt
546

```

<210> 2296  
 <211> 182  
 <212> PRT  
 <213> Homo sapiens

```

<400> 2296
Gly Thr Asp Pro Ser Gly Gly Ala Gly Ile Arg Xaa Asp Leu Xaa Thr
1           5           10           15
Phe Ser Ala Leu Gly Ala Tyr Gly Cys Ser Val Ile Thr Ala Leu Val
      20           25           30
Ala Gln Asn Thr Arg Gly Val Gln Ser Val Tyr Arg Ile Glu Pro Asp

```

```

      35      40      45
Phe Val Gly Ala Gln Leu Asp Ser Val Phe Ser Asp Val Arg Ile Asp
      50      55      60
Ser Thr Lys Ile Gly Met Leu Ala Glu Ala Asp Ile Val Glu Ala Val
65      70      75      80
Ala Glu Arg Leu Lys His Tyr Arg Val Lys Asn Val Val Leu Asp Thr
      85      90      95
Val Met Leu Ala Lys Ser Gly Asp Pro Leu Leu Ser Pro Ala Ala Val
      100      105      110
Glu Thr Leu Arg Lys His Leu Leu Pro His Val Ala Leu Ile Thr Pro
      115      120      125
Asn Leu Pro Glu Ala Ala Ala Leu Leu Asp Ala Pro His Ala Arg Thr
      130      135      140
Glu His Glu Met Lys Glu Gln Gly Arg Ala Leu Leu Ala Leu Gly Cys
145      150      155      160
Glu Ala Val Leu Met Lys Gly Gly His Leu Asp Asp Pro Glu Ser Pro
      165      170      175
Asp Trp Leu Phe Thr Arg
      180

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<210> 2297  
 <211> 414  
 <212> DNA  
 <213> Homo sapiens

```

<400> 2297
gggaattccg ggcccttccc cccaagcccg ggtaattttt tgtattttta aaaaaaagg
60
gaattttccc acgttggggg ggggggggttc ggactttttc ccccaaaaac ccccccccc
120
caccccccca aaggccgaaa agcagggcca aaaccccccg gacccccccc ggggggggca
180
aaaggaaaaa cccctttttt tttttttttt ttttatacac atgaggggtct ctgggtaata
240
aatgttgaga tgtaggggta ggtgagatta aacaggttct ttttttcatg atttctcgga
300
gtctttatga tgctccacac cagtacttct caaagctgac tgtgtataca aaacactggg
360
gatctgaccc acatgtaaag tctgatttct ttgggtctgg gcaggcctga aatn
414

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<210> 2298  
 <211> 67  
 <212> PRT  
 <213> Homo sapiens

```

<400> 2298
Lys Lys Arg Glu Phe Ser His Val Gly Gly Gly Gly Phe Gly Leu Phe
1      5      10      15
Pro Pro Lys Thr Pro Pro Pro His Pro Pro Lys Gly Arg Lys Ala Gly
20      25      30
Pro Lys Pro Pro Gly Pro Pro Pro Gly Gly Ala Lys Gly Lys Thr Pro
35      40      45
Phe Phe Phe Phe Phe Phe Tyr Thr His Glu Gly Leu Trp Leu Ile Asn

```

50  
 Val Glu Met  
 65  
  
 <210> 2299  
 <211> 987  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 2299  
 ngagatgtct aagttatttt ttttttcccg gaaggcaaat ggctggcgtg gaagcacaac  
 60  
 ccgctttcac tcttcgaatt tgtgcttagc tcttttcttg taccctgcga ctcgtgacca  
 120  
 acatgctgtg atgtgtgccg agggaggaat tggtcagcta cacaacctgg atcttaccac  
 180  
 agtttggata tgactgaggc tctccaatgg gccagatata actggcgacg gctgatcaga  
 240  
 ggtgcaacca gggatgatga ttcagggcca tacaactatt cctcgttgct cgctgtggg  
 300  
 cgcaagtctt ctcagatccc taaactgtca ggaaggcacc ggattgttgt tccccacatc  
 360  
 cagcccttca aggatgagta tgagaagttc tccggagcct atgtgaacaa tcgaatacga  
 420  
 acaacaaagt acacacttct gaattttgtg ccaagaaatt tatttgaaca atttcacaga  
 480  
 gctgccaat tttatttctt gttcctagtt gtcctgaact gggtagcctt ggtagaagcc  
 540  
 ttccaaaagg aatcaccat gttgcctctg gtggtggtcc ttacaattat cgcaattaaa  
 600  
 gatggcctgg aagattatcg gaaatacaaa attgacaaac agatcaataa ttttaataact  
 660  
 aaagtttata gtaggaaaga gaaaaaatac attgaccgat gctggaaaga cgttactgtt  
 720  
 ggggacttta ttcgcctctc ctgcaacgag gtcacccctg cagacatggt actactcttt  
 780  
 tccactgata cagatggaat ctgtcacatt gagacttctg gtcttgatgg agagagcaat  
 840  
 ttaaaacaga ggcaggtggg tcggggatat gcagaacagg actctgaagt tgatcctgag  
 900  
 aagttttcca gtaggataga atgtgaaagc ccaaacaatg acctcagcag attccgaggg  
 960  
 ttcctagaac attccaacaa agaacgc  
 987  
  
 <210> 2300  
 <211> 266  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 2300  
 Met Thr Glu Ala Leu Gln Trp Ala Arg Tyr His Trp Arg Arg Leu Ile  
 1 5 10 15  
 Arg Gly Ala Thr Arg Asp Asp Asp Ser Gly Pro Tyr Asn Tyr Ser Ser

<210> 2302

<211> 130  
 <212> PRT  
 <213> Homo sapiens

<400> 2302  
 Tyr Pro Lys Arg Phe Lys Phe Asp Ala Asp Glu Phe Tyr Leu Lys Ser  
     1                    5                    10                    15  
 Ser Glu Glu Met Xaa Ala Thr Ser Ser Ala Xaa Phe Pro Glu Ala Cys  
                     20                    25                    30  
 Asp Asn Thr Met Glu Ile Ala Glu Xaa Val Ala Thr Leu Asn Ser Thr  
                     35                    40                    45  
 Gln Thr Gln Xaa Tyr Met Pro Asp Phe Pro Thr Pro Glu Gly Glu Asn  
     50                    55                    60  
 Glu Glu Ser Trp Phe Val Lys Glu Val Glu Arg Gly Leu His Tyr Arg  
     65                    70                    75                    80  
 Phe Pro Glu Gly Ile Pro Asp Asp Val Arg Lys Gln Ala Asp Tyr Glu  
                     85                    90                    95  
 Val Gly Ile Ile Thr Gln Met Gly Phe Pro Gly Tyr Phe Leu Val Val  
                     100                    105                    110  
 Ala Asp Phe Ile Asn Trp Ala Lys Asn Asn Gly Ile Arg Val Gly Pro  
             115                    120                    125  
 Gly Arg  
     130

<210> 2303  
 <211> 638  
 <212> DNA  
 <213> Homo sapiens

<400> 2303  
 nnggatccag gctgcccctg tgtgtctcct tcagtcttcg ttagctgcct gctgctgtct  
 60  
 gcacctgtgt ttggtacct gggcgaccga catagccgca aggctaccat gagcttcggt  
 120  
 atcttctgtg ggtcaggagc tggcctctct agctccttca tctccccccg gtattcttgg  
 180  
 ctcttcttcc tgtccccggg catcgagggc actggctcgg ccagctactc caccatcgcg  
 240  
 cccaccgtcc tggggcacct ctctgtgagg gaccagcgca cccgcgtgct ggctgtcttc  
 300  
 tacatcttta tccccgttgg aagtggctct ggctacgtgc tggggtcggc tgtgacgatg  
 360  
 ctgactggga actggcgctg ggccctccga gtcatgccct gcctggaggc cgtggccttg  
 420  
 atcctgctta tcctgctggt tccagaccca ccccggggag ctgccgagac acagggggag  
 480  
 gggggccgtg gaggttcag aagcagctgg tgtgaggacg tcagatacct ggggaaaaac  
 540  
 tggagttttg tgtggtcgac cctcgagtg accgcatgg cctttgtgac tggagccctg  
 600  
 ggggttctgg cccccaagtt tctgctcgag gcacgcgt  
 638

<210> 2304

<211> 212  
 <212> PRT  
 <213> Homo sapiens

<400> 2304  
 Xaa Asp Pro Gly Cys Pro Cys Val Ser Pro Ser Val Phe Val Ser Cys  
 1 5 10 15  
 Leu Leu Leu Ser Ala Pro Val Phe Gly Tyr Leu Gly Asp Arg His Ser  
 20 25 30  
 Arg Lys Ala Thr Met Ser Phe Gly Ile Leu Leu Trp Ser Gly Ala Gly  
 35 40 45  
 Leu Ser Ser Ser Phe Ile Ser Pro Arg Tyr Ser Trp Leu Phe Phe Leu  
 50 55 60  
 Ser Arg Gly Ile Glu Gly Thr Gly Ser Ala Ser Tyr Ser Thr Ile Ala  
 65 70 75 80  
 Pro Thr Val Leu Gly Asp Leu Phe Val Arg Asp Gln Arg Thr Arg Val  
 85 90 95  
 Leu Ala Val Phe Tyr Ile Phe Ile Pro Val Gly Ser Gly Leu Gly Tyr  
 100 105 110  
 Val Leu Gly Ser Ala Val Thr Met Leu Thr Gly Asn Trp Arg Trp Ala  
 115 120 125  
 Leu Arg Val Met Pro Cys Leu Glu Ala Val Ala Leu Ile Leu Leu Ile  
 130 135 140  
 Leu Leu Val Pro Asp Pro Pro Arg Gly Ala Ala Glu Thr Gln Gly Glu  
 145 150 155 160  
 Gly Ala Val Gly Gly Phe Arg Ser Ser Trp Cys Glu Asp Val Arg Tyr  
 165 170 175  
 Leu Gly Lys Asn Trp Ser Phe Val Trp Ser Thr Leu Gly Val Thr Ala  
 180 185 190  
 Met Ala Phe Val Thr Gly Ala Leu Gly Phe Trp Ala Pro Lys Phe Leu  
 195 200 205  
 Leu Glu Ala Arg  
 210

<210> 2305  
 <211> 340  
 <212> DNA  
 <213> Homo sapiens

<400> 2305  
 gccccgcct ctatcttccg gcatcgtcac agtcgcatcg tgacgggtact ggctggagtc  
 60  
 tcggaccagc acactttgac cgtcgtggtc gcctcgtgac atggggtaac gcgaacctcg  
 120  
 tcgtctctgt tcttgacctc ttccgtgccc ccattgacaa cgatcgggca agttcactgg  
 180  
 cccgcaacgc tattggtgac gcagcactcg cagctggtct cgaccgactc gtccacacca  
 240  
 cggcgtcggt gcgcgacgag ggcgatgagt tggtcgctcg tactcgcagc gctgctgccg  
 300  
 ccgcacgcaa ttccatgacg acaacgtgga gttggcgcgc  
 340

<210> 2306



<211> 101  
 <212> PRT  
 <213> Homo sapiens

<400> 2306  
 Met Glu Leu Arg Ala Ala Ala Ala Leu Arg Val Thr Thr Thr Asn  
 1 5 10 15  
 Ser Ser Pro Ser Ser Arg Thr Asp Ala Val Val Trp Thr Ser Arg Ser  
 20 25 30  
 Arg Pro Ala Ala Ser Ala Ala Ser Pro Ile Ala Leu Arg Ala Ser Glu  
 35 40 45  
 Leu Ala Arg Ser Leu Ser Met Gly Ala Arg Lys Arg Ser Arg Thr Gly  
 50 55 60  
 Ala Thr Arg Phe Ala Leu Pro His Val Thr Arg Arg Pro Arg Arg Ser  
 65 70 75 80  
 Lys Cys Ala Gly Pro Arg Leu Gln Pro Val Pro Ser Arg Cys Asp Cys  
 85 90 95  
 Asp Asp Ala Gly Arg  
 100

<210> 2307  
 <211> 360  
 <212> DNA  
 <213> Homo sapiens

<400> 2307  
 ngcttctcag ctgaaggggg agataaagct ctacataaga tgggtccagg tgggggcaaa  
 60  
 gccaaaggcac tgggtggggc tggcagtggg agcaagggtc cagcaggtgg cggaagcaag  
 120  
 cgacggctga gcagcgaaga cagctccctg gagccagacc tggccgagat gagcctggat  
 180  
 gacagcagcc tggccctggg cgcagaggcc aggaccttcg ggggattccc tgagagccct  
 240  
 ccaccctgtc ctctccacgg tggctcccgga ggcccttcca ctttccttcc tgagccccca  
 300  
 gatacttatg aagaagatgg tgatgagagt ggcaatgggc ttcccaaaac caaagaggca  
 360

<210> 2308  
 <211> 120  
 <212> PRT  
 <213> Homo sapiens

<400> 2308  
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 1 5 10 15  
 Gly Gly Gly Lys Ala Lys Ala Leu Gly Gly Ala Gly Ser Gly Ser Lys  
 20 25 30  
 Gly Ser Ala Gly Gly Gly Ser Lys Arg Arg Leu Ser Ser Glu Asp Ser  
 35 40 45  
 Ser Leu Glu Pro Asp Leu Ala Glu Met Ser Leu Asp Asp Ser Ser Leu  
 50 55 60  
 Ala Leu Gly Ala Glu Ala Arg Thr Phe Gly Gly Phe Pro Glu Ser Pro

```

65              70              75              80
Pro Pro Cys Pro Leu His Gly Gly Ser Arg Gly Pro Ser Thr Phe Leu
              85              90              95
Pro Glu Pro Pro Asp Thr Tyr Glu Glu Asp Gly Asp Glu Ser Gly Asn
              100              105              110
Gly Leu Pro Lys Thr Lys Glu Ala
              115              120

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<210> 2309  
 <211> 395  
 <212> DNA  
 <213> Homo sapiens

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<400> 2309
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120
tcttttccag caggcacagg gattcctcat gggggaggca gagcccaccc gtctgtcctc
180
ggtgacggcc tgagctgtgc acggcctccc ctgccctcct gttctcaggc cccccagggt
240
ccatccagcc ccagcgtgtg gcgttctggc tcttccctgg agtctcctcc cagaccacgc
300
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360
tgttgtgtta tgcccacaac aggcttgccg tcacc
395

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<210> 2310  
 <211> 108  
 <212> PRT  
 <213> Homo sapiens

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<400> 2310
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1              5              10              15
His Ser Leu Pro Trp Ala Ala Gly Pro Asp Trp Val Pro Thr Ser Ser
20              25              30
Tyr Pro Leu Gly Ser Phe Pro Ala Gly Thr Gly Ile Pro His Gly Gly
35              40              45
Gly Arg Ala His Pro Ser Val Leu Gly Asp Gly Leu Ser Cys Ala Arg
50              55              60
Pro Pro Leu Pro Ser Cys Ser Gln Ala Pro Gln Gly Pro Ser Ser Pro
65              70              75              80
Ser Val Trp Arg Ser Gly Ser Ser Leu Glu Ser Pro Pro Arg Pro Arg
85              90              95
Asp Ser Thr His Thr Val Pro Ser Gly Leu Cys Gly
100              105

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<210> 2311  
 <211> 378  
 <212> DNA  
 <213> Homo sapiens

<400> 2311  
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 120  
 gatgtcggca gtcccatggg cggcagcgcg gacgtggctc tcgaaacggc cgatgctgcc  
 180  
 gtccttcacg gacgggtggg ggacgtcttc gcgatgatcg ccctatcgaa gcgaaccatg  
 240  
 gccaacattc gacagaacat cgcgatcgcg atcgggctaa aggcggtggt ccttgtaacg  
 300  
 accgtcgtcg gcatcacggg gctttggcct gcaatcctcg ccgatacggg gaccacggag  
 360  
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 378

<210> 2312  
 <211> 126  
 <212> PRT  
 <213> Homo sapiens

<400> 2312  
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 1 5 10 15  
 Leu Lys Arg Gln Gly Phe Ser Val Ile Lys Val Gly Asp Gly Ile Asn  
 20 25 30  
 Asp Cys Asp Ala Leu Ala Ala Asp Val Gly Ser Pro Met Gly Gly  
 35 40 45  
 Ser Ala Asp Val Ala Leu Glu Thr Ala Asp Ala Val Leu His Gly  
 50 55 60  
 Arg Val Gly Asp Val Phe Ala Met Ile Ala Leu Ser Lys Arg Thr Met  
 65 70 75 80  
 Ala Asn Ile Arg Gln Asn Ile Ala Ile Gly Leu Lys Ala Val  
 85 90 95  
 Phe Leu Val Thr Thr Val Val Gly Ile Thr Gly Leu Trp Pro Ala Ile  
 100 105 110  
 Leu Ala Asp Thr Gly Thr Thr Glu Leu Val Thr Met Asn Ala  
 115 120 125

<210> 2313  
 <211> 669  
 <212> DNA  
 <213> Homo sapiens

<400> 2313  
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 atccgaatca tggctcgctc tggttggcct ggaaccatta acgtacgcct caccatcg  
 120  
 ttaagcgacg ccggtctagc tgcgaagtc accgcgcgca atgtcggtag gacagcggg  
 180  
 ccgcttgat acgcagcaca ccctatctc tgtctgggtg gcaccatcga cgactggaca  
 240

gtcgacgccc cgtttacctc gtgggttacag gtcgatgac ggctgctacc aatgcagatg  
 300  
 cgcgagatgg acagcatcca cgcgctgaac ggtctcacgg gcggacagcg caccttcgat  
 360  
 accgcttaca ccgtgaaagg aggacggaac cgctcgatcg cccgcatggc gtatccgggt  
 420  
 ctcaacgggtg aaacgagcca cgaattgtgg ggcgacgccg cgatgagctg ggtgcaagtc  
 480  
 tacactccag acgaccgcca cagtctggcc atcgagccaa tgacctgcgg cccagatgca  
 540  
 tttaatgagg gcccgaacca cggtgacgtc attcgactgg agcccggtaa tgacgtcaca  
 600  
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 660  
 ttcacgcgt  
 669

<210> 2314

<211> 206

<212> PRT

<213> Homo sapiens

<400> 2314

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Val | Ala | Trp | Ser | Arg | Trp | Ser | Leu | Val | Glu | His | Thr | Asp | Thr | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Val | Thr | Gln | Thr | Ile | Arg | Ile | Met | Ala | Arg | Pro | Gly | Trp | Pro | Gly | Thr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ile | Asn | Val | Arg | Leu | Thr | His | Arg | Leu | Ser | Asp | Ala | Gly | Leu | Ala | Val |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Glu | Val | Thr | Ala | Arg | Asn | Val | Gly | Thr | Thr | Ala | Gly | Pro | Leu | Gly | Tyr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Ala | Ala | His | Pro | Tyr | Leu | Cys | Leu | Gly | Gly | Thr | Ile | Asp | Asp | Trp | Thr |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Val | Asp | Ala | Pro | Phe | Thr | Ser | Trp | Leu | Gln | Val | Asp | Asp | Arg | Leu | Leu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Pro | Met | Gln | Met | Arg | Glu | Met | Asp | Ser | Ile | His | Ala | Leu | Asn | Gly | Leu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Thr | Gly | Gly | Gln | Arg | Thr | Phe | Asp | Thr | Ala | Tyr | Thr | Val | Lys | Gly | Gly |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Arg | Asn | Arg | Arg | Ile | Ala | Arg | Met | Ala | Tyr | Pro | Gly | Leu | Asn | Gly | Glu |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Thr | Ser | His | Glu | Leu | Trp | Gly | Asp | Ala | Ala | Met | Ser | Trp | Val | Gln | Val |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Tyr | Thr | Pro | Asp | Asp | Arg | His | Ser | Leu | Ala | Ile | Glu | Pro | Met | Thr | Cys |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Gly | Pro | Asp | Ala | Phe | Asn | Glu | Gly | Pro | Thr | His | Gly | Asp | Val | Ile | Arg |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Leu | Glu | Pro | Gly | Asn | Asp | Val | Thr | Leu | His | Trp | Gly | Ile | Ala |     |     |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     |     | 205 |     |     |

<210> 2315

<211> 546

<212> DNA

<213> Homo sapiens

&lt;400&gt; 2315

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 60  
 acccaaggcc gaccaattcg catcgataag gcggtcgctt atcacacttc tcgcggcgctg  
 120  
 ccggtacatg aactgtttga ccgagtgcgc cgcagcttag accgagtgcg tgaacagggg  
 180  
 cacaacgtct actacgacga acagcgtgca tggcttgacg attactgggc aacggctgat  
 240  
 gttgaggtcg agggcgcccc gaccgggtatt cagcaggctg tcagggtggaa cctttccag  
 300  
 attgctcagg catcagcccg tgcagatcaa cttggcattc cggcaaaggg tgtaaccggg  
 360  
 tcaggetatg aaggccacta cttttgggac actgaggttt atgtcatccc gatgttgacc  
 420  
 tacactcatc caagaatcgc tgagaatgcg ctgagattcc ggggtgaatac ccttcgcaa  
 480  
 getcgacgcc gggctaagga attgtctgaa cgaggcgccc tttcccgctg gcgaacaatc  
 540  
 accggt  
 546

&lt;210&gt; 2316

&lt;211&gt; 182

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2316

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Ala | Ser | Leu | Ile | Asp | Thr | Glu | Pro | Gly | Met | Gly | Lys | Arg | Val | Tyr |
| 1   |     |     | 5   |     |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Arg | Val | Glu | Ala | Thr | Gln | Gly | Arg | Pro | Ile | Arg | Ile | Asp | Lys | Ala | Val |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ala | Tyr | His | Thr | Ser | Arg | Gly | Val | Pro | Val | His | Glu | Leu | Phe | Asp | Arg |
|     | 35  |     |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Val | Arg | Arg | Ser | Leu | Asp | Arg | Val | Arg | Glu | Gln | Gly | His | Asn | Val | Tyr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Tyr | Asp | Glu | Gln | Arg | Ala | Trp | Leu | Asp | Asp | Tyr | Trp | Ala | Thr | Ala | Asp |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Val | Glu | Val | Glu | Gly | Ala | Pro | Thr | Gly | Ile | Gln | Gln | Ala | Val | Arg | Trp |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Asn | Leu | Phe | Gln | Ile | Ala | Gln | Ala | Ser | Ala | Arg | Ala | Asp | Gln | Leu | Gly |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Ile | Pro | Ala | Lys | Gly | Val | Thr | Gly | Ser | Gly | Tyr | Glu | Gly | His | Tyr | Phe |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Trp | Asp | Thr | Glu | Val | Tyr | Val | Ile | Pro | Met | Leu | Thr | Tyr | Thr | His | Pro |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Arg | Ile | Ala | Glu | Asn | Ala | Leu | Arg | Phe | Arg | Val | Asn | Thr | Leu | Pro | Gln |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Ala | Arg | Arg | Arg | Ala | Lys | Glu | Leu | Ser | Glu | Arg | Gly | Ala | Leu | Phe | Pro |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Trp | Arg | Thr | Ile | Thr | Gly |     |     |     |     |     |     |     |     |     |     |
|     |     |     |     |     | 180 |     |     |     |     |     |     |     |     |     |     |

<210> 2317  
 <211> 496  
 <212> DNA  
 <213> Homo sapiens

<400> 2317  
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 60  
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 120  
 cagctgctga cgctgctgtg atgccgagga gatcggagac gattcgtggg tgcattctgcc  
 180  
 gggtcagttc gatcagcgcg gtcgttcgag cgcttcctga acgcagcccc tgetggcgca  
 240  
 gacgtcggct gagtgggcct ggtgtgagat gcaaccccg attcctgccg gaaagagcc  
 300  
 atccctcggg tcggtgtctc gatgtgtcag cgagctcggc gatcgcatte ccgaggacct  
 360  
 cgggcagttc gattggctcg gctccgatgg tgagcttccc cggtcgtgat gtcacgtcga  
 420  
 cctgctcacg ggtgagcgcg acgatgcgag tgaggtggag gccgtagagg agcacgagca  
 480  
 acccagcggc acgcgt  
 496

<210> 2318  
 <211> 108  
 <212> PRT  
 <213> Homo sapiens

<400> 2318  
 Met Pro Arg Arg Ser Glu Thr Ile Arg Gly Cys Ile Cys Arg Val Ser  
 1 5 10 15  
 Ser Ile Ser Ala Val Val Arg Ala Leu Pro Glu Arg Ser Pro Cys Trp  
 20 25 30  
 Arg Arg Arg Arg Leu Ser Gly Pro Gly Val Arg Cys Asn Pro Gly Phe  
 35 40 45  
 Leu Pro Gly Lys Ser His Pro Ser Gly Arg Cys Leu Asp Val Ser Ala  
 50 55 60  
 Ser Ser Ala Ile Ala Phe Pro Arg Thr Ser Gly Ser Ser Ile Gly Ser  
 65 70 75 80  
 Ala Pro Met Val Ser Phe Pro Gly Arg Asp Val Thr Ser Thr Cys Ser  
 85 90 95  
 Arg Val Ser Ala Thr Met Arg Val Arg Trp Arg Pro  
 100 105

<210> 2319  
 <211> 1748  
 <212> DNA  
 <213> Homo sapiens

<400> 2319  
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gaatatactc aattccaaaa ttatgtgaaa gaattgaaga aaaaacggaa gcagaaaact  
120  
ttttagtgga aaccagctaa tgggtgcaatg ggtcatggga tttctttgat aagaaatggg  
180  
gacaaacttc catctcagga tcatttgatt gttcaagaat acattgaaaa gcctttccta  
240  
atggaagggtt acaagtttga cttacgaatt tatattctgg ttacatcgtg tgatccacta  
300  
aaaatatttc tctaccatga tgggcttggt cgaatgggta cagagaagta cattccacct  
360  
aatgagtcca atttgaccca gttatacatg catctgacaa actactccgt gaacaagcat  
420  
aatgagcatt ttgaacggga tgaaactgag aacaaaggca gcaaacgttc catcaaatgg  
480  
tttacagaat tccttcaagc aaatcaacat gatgttgcta agttttggag tgatatttca  
540  
gaattggtgg taaagacctt gattgtagca gaacctcatg tcctgcatgc ctatcgaatg  
600  
tgtagacctg gtcaacctcc aggaagcgaa agtgtctgct ttgaagtcct gggatttgat  
660  
attttggtgg atagaaaact aaagccatgg cttctggaga ttaaccgagc cccaagcttt  
720  
ggaactgac agaaaataga ctatgatgta aaaaggggag tgctgctaaa tgcgttgaag  
780  
ctactaaaca taaggaccag tgacaaaaga agaaacttgg ccaaacaaaa agctgaggct  
840  
caaaggaggc tctatggtca aaattcaatt aaaaggctct taccaggctc ctcagactgg  
900  
gaacagcaga gacaccagtt ggagaggcgg aaagaagagt tgaaagagag actcgctcaa  
960  
gtacgaaagc agatctcacg agaagaacat gaaaatcgac atatggggaa ttatagacga  
1020  
atttatctc ctgaagataa agcattactt gaaaagtatg aaaatttgtt agctgttgcc  
1080  
tttcagacct tcctttcagg aagagcagct tcattccagc gagagttgaa taatcctttg  
1140  
aaaaggatga aggaagaaga tattttggat cttctggagc aatgtgaaat tgatgatgaa  
1200  
aagttgatgg gaaaaactac caagactcga ggaccaaagc ctctgtgttc tatgcctgag  
1260  
agtactgaga taatgaaaag accaaagtac tgcagcagtg acagcagtta tgatagtagc  
1320  
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1380  
aagcaagtta catataatct taaacctcc aaccactaca aattaattca acaaccagc  
1440  
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1500  
gacacccgcc cattttctgc tcaacaaatg atatctgtgt cacggccaac ttctgcatct  
1560  
cggtcacatt ccttaaaccg gggccttcc cctacatgag gcattctgct cacagtaatg  
1620  
atgcctgctc taccaactct caagtgagtg agtctttgag gcaactgaaa acaaaagaac  
1680

aagaagatga tctaacaagt cagaccttat ttgtttctcaa agacatgaag atccgggtttc  
 1740  
 caggaaag  
 1748

<210> 2320  
 <211> 532  
 <212> PRT  
 <213> Homo sapiens

<400> 2320

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Ile | Lys | Ser | Arg | Ser | Leu | Asp | Tyr | Thr | Phe | Val | Pro | Arg | Thr | Trp |
| 1   |     |     | 5   |     |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ile | Phe | Pro | Ala | Glu | Tyr | Thr | Gln | Phe | Gln | Asn | Tyr | Val | Lys | Glu | Leu |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |     |
| Lys | Lys | Lys | Arg | Lys | Gln | Lys | Thr | Phe | Ile | Val | Lys | Pro | Ala | Asn | Gly |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Ala | Met | Gly | His | Gly | Ile | Ser | Leu | Ile | Arg | Asn | Gly | Asp | Lys | Leu | Pro |
| 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |
| Ser | Gln | Asp | His | Leu | Ile | Val | Gln | Glu | Tyr | Ile | Glu | Lys | Pro | Phe | Leu |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Met | Glu | Gly | Tyr | Lys | Phe | Asp | Leu | Arg | Ile | Tyr | Ile | Leu | Val | Thr | Ser |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Cys | Asp | Pro | Leu | Lys | Ile | Phe | Leu | Tyr | His | Asp | Gly | Leu | Val | Arg | Met |
|     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |     |
| Gly | Thr | Glu | Lys | Tyr | Ile | Pro | Pro | Asn | Glu | Ser | Asn | Leu | Thr | Gln | Leu |
|     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |     |
| Tyr | Met | His | Leu | Thr | Asn | Tyr | Ser | Val | Asn | Lys | His | Asn | Glu | His | Phe |
| 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |     |
| Glu | Arg | Asp | Glu | Thr | Glu | Asn | Lys | Gly | Ser | Lys | Arg | Ser | Ile | Lys | Trp |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Phe | Thr | Glu | Phe | Leu | Gln | Ala | Asn | Gln | His | Asp | Val | Ala | Lys | Phe | Trp |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Ser | Asp | Ile | Ser | Glu | Leu | Val | Val | Lys | Thr | Leu | Ile | Val | Ala | Glu | Pro |
|     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |     |
| His | Val | Leu | His | Ala | Tyr | Arg | Met | Cys | Arg | Pro | Gly | Gln | Pro | Pro | Gly |
|     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |     |
| Ser | Glu | Ser | Val | Cys | Phe | Glu | Val | Leu | Gly | Phe | Asp | Ile | Leu | Leu | Asp |
| 210 |     |     |     | 215 |     |     |     |     |     | 220 |     |     |     |     |     |
| Arg | Lys | Leu | Lys | Pro | Trp | Leu | Leu | Glu | Ile | Asn | Arg | Ala | Pro | Ser | Phe |
| 225 |     |     |     | 230 |     |     |     |     |     | 235 |     |     |     | 240 |     |
| Gly | Thr | Asp | Gln | Lys | Ile | Asp | Tyr | Asp | Val | Lys | Arg | Gly | Val | Leu | Leu |
|     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |     |
| Asn | Ala | Leu | Lys | Leu | Leu | Asn | Ile | Arg | Thr | Ser | Asp | Lys | Arg | Arg | Asn |
|     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |     |     |     |
| Leu | Ala | Lys | Gln | Lys | Ala | Glu | Ala | Gln | Arg | Arg | Leu | Tyr | Gly | Gln | Asn |
|     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |     |
| Ser | Ile | Lys | Arg | Leu | Leu | Pro | Gly | Ser | Ser | Asp | Trp | Glu | Gln | Gln | Arg |
| 290 |     |     |     |     | 295 |     |     |     |     | 300 |     |     |     |     |     |
| His | Gln | Leu | Glu | Arg | Arg | Lys | Glu | Glu | Leu | Lys | Glu | Arg | Leu | Ala | Gln |
| 305 |     |     |     | 310 |     |     |     |     |     | 315 |     |     |     | 320 |     |
| Val | Arg | Lys | Gln | Ile | Ser | Arg | Glu | Glu | His | Glu | Asn | Arg | His | Met | Gly |
|     |     |     | 325 |     |     |     |     | 330 |     |     |     | 335 |     |     |     |
| Asn | Tyr | Arg | Arg | Ile | Tyr | Pro | Pro | Glu | Asp | Lys | Ala | Leu | Leu | Glu | Lys |



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<210> 2321
<211> 433
<212> DNA
<213> Homo sapiens
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<210> 2322
<211> 105
<212> PRT
<213> Homo sapiens
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&lt;400&gt; 2322

Met Leu Leu Thr Leu Ser Gly Leu Leu Leu Phe Glu Lys Pro Met Gly  
 1 5 10 15  
 Ile Cys Phe Ile Val Val Ser Leu Asn Ser Tyr Leu Ala Glu Ser Ile  
 20 25 30  
 Ser Gln Gly Lys Tyr Cys Ser Val Met Val Ser Trp Thr Leu Phe Ser  
 35 40 45  
 Ile Cys Phe Ser Thr Ser Ile Asn Gly Leu Leu Pro Ala Ile Met Thr  
 50 55 60  
 Cys Met His Leu Leu Ser Ser Phe Ser Lys Gln Lys Lys Leu Cys Gly  
 65 70 75 80  
 Cys Ile Ser Arg Thr Leu Asn His Phe Gln Asp Ser Ile Glu Leu Glu  
 85 90 95  
 Thr His Ile Asp Thr Ser Thr Gln Leu  
 100 105

&lt;210&gt; 2323

&lt;211&gt; 532

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2323

acgcgtcaaa actggcaaag ctggcggctt agggggaggg gcaagtggac ttggaggccc  
 60  
 tcctccactg tgcaccccct tggaaaaaaa gcgagggggg catcaagtaa aagtttcttg  
 120  
 ccaggcagag ccagctcggc ggccccccgc acatagctgg ggtagcagg ggttgcttct  
 180  
 ctgccgggca cagcgncttc caggagccag ccggggagag ctgagccaag gccgaaggag  
 240  
 ccgcctgcgg gcttagccgc cccctccgc cegtggccc cagagcggac gctgggacgc  
 300  
 ccgggtctg gcagctctgc gcccggttag gagcgggcgg gcgagcatta gctgcgtcc  
 360  
 tggagaaggg ggcagcggc gcagttgagg ccgaagcagc ccctcgcggg cgtaggatac  
 420  
 ctgtcagtga ggcgccgat tgcacggccc ccgggtagt cctgccggcg aggggaggga  
 480  
 gctcgggtga cttggccatc cccatccccg gccaggccc ggagggcggc cg  
 532

&lt;210&gt; 2324

&lt;211&gt; 51

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2324

Thr Arg Gln Asn Trp Gln Ser Trp Arg Leu Arg Gly Arg Gly Lys Trp  
 1 5 10 15  
 Thr Trp Arg Pro Ser Ser Thr Val His Pro Leu Gly Lys Lys Ala Glu  
 20 25 30  
 Gly Ala Ser Ser Lys Ser Phe Leu Pro Gly Arg Ala Ser Ser Ala Ala  
 35 40 45  
 Pro Arg Thr

50

&lt;210&gt; 2325

&lt;211&gt; 459

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2325

```

nnacgcgtgc aggaccgcat gagcgccatc tgggagagag gagtgggttg aggaaagatg
60
gatgagaacc gttttgtggc cgttaccagt tccaacgcag ctaagcttct gaacctgtat
120
ccccgcaagg gccgcattat tcccggagcc gatgctgatg tgggtggtgtg ggaccagaa
180
gccacaaaga ccattctcagc cagcacgcag gtccaggagg gagacttcaa cctgtatgag
240
aacatgcgct gccacggcgt gccactggtc accatcagcc gggggcgcgct cgtgtatgag
300
aacggcgtct tcatgtgcgc cgagggcacc ggcaagttct gtcccctgag gtccttccca
360
gacactgtct acaagaagct ggtccagaga gagaagactt taaaggtag aggagtggcc
420
cgactccct acctggggga tgctgctgtt gtcgtgcac
459

```

&lt;210&gt; 2326

&lt;211&gt; 153

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2326

```

Xaa Arg Val Gln Asp Arg Met Ser Ala Ile Trp Glu Arg Gly Val Val
1      5      10      15
Gly Gly Lys Met Asp Glu Asn Arg Phe Val Ala Val Thr Ser Ser Asn
20     25     30
Ala Ala Lys Leu Leu Asn Leu Tyr Pro Arg Lys Gly Arg Ile Ile Pro
35     40     45
Gly Ala Asp Ala Asp Val Val Val Trp Asp Pro Glu Ala Thr Lys Thr
50     55     60
Ile Ser Ala Ser Thr Gln Val Gln Gly Gly Asp Phe Asn Leu Tyr Glu
65     70     75     80
Asn Met Arg Cys His Gly Val Pro Leu Val Thr Ile Ser Arg Gly Arg
85     90     95
Val Val Tyr Glu Asn Gly Val Phe Met Cys Ala Glu Gly Thr Gly Lys
100    105    110
Phe Cys Pro Leu Arg Ser Phe Pro Asp Thr Val Tyr Lys Lys Leu Val
115    120    125
Gln Arg Glu Lys Thr Leu Lys Val Arg Gly Val Ala Arg Thr Pro Tyr
130    135    140
Leu Gly Asp Val Ala Val Val Val His
145    150

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&lt;210&gt; 2327

&lt;211&gt; 599

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2327

gaattccaga agatcaagta ttcctacgat gccctggaga agaagcagtt tctccccgtg  
60  
gcctttcctg tgggaaacgc cttctcatac tatcagagca acagaggctt ccaggaagac  
120  
tcagagatcc gagcagctga gaagaaattt gggagcaaca aggccgagat ggtggtgcct  
180  
gacttctcgg agcttttcaa ggagagagcc acagccccct tctttgtatt tcagggtgttc  
240  
tgtgtggggc tctggtgcct ggatgagtac tgggtactaca gcgtctttac gctatccatg  
300  
ctggtggcgt tcgaggcctc gctggtgcag cagcagatgc ggaacatgtc ggagatccgg  
360  
aagatgggca acaagcccca catgatccag gtctaccgaa gccgcaagtg gagggccatt  
420  
gccagtgatg agatcgtacc aggggacatc gtctccatcg gtgaggccgg gttccgctca  
480  
gtcccagtgg gagccccagc ctcagggcct ctggccaacc ctctgcctc tgccctgcag  
540  
gccgctcccc acaggagaac ctggtgccat gtgacgtgct tctgctgcga ggccgctgc  
599

&lt;210&gt; 2328

&lt;211&gt; 199

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2328

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Phe | Gln | Lys | Ile | Lys | Tyr | Ser | Tyr | Asp | Ala | Leu | Glu | Lys | Lys | Gln |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Phe | Leu | Pro | Val | Ala | Phe | Pro | Val | Gly | Asn | Ala | Phe | Ser | Tyr | Tyr | Gln |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ser | Asn | Arg | Gly | Phe | Gln | Glu | Asp | Ser | Glu | Ile | Arg | Ala | Ala | Glu | Lys |
|     |     | 35  |     |     |     |     | 40  |     |     |     | 45  |     |     |     |     |
| Lys | Phe | Gly | Ser | Asn | Lys | Ala | Glu | Met | Val | Val | Pro | Asp | Phe | Ser | Glu |
|     | 50  |     |     |     | 55  |     |     |     |     |     | 60  |     |     |     |     |
| Leu | Phe | Lys | Glu | Arg | Ala | Thr | Ala | Pro | Phe | Phe | Val | Phe | Gln | Val | Phe |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Cys | Val | Gly | Leu | Trp | Cys | Leu | Asp | Glu | Tyr | Trp | Tyr | Tyr | Ser | Val | Phe |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Thr | Leu | Ser | Met | Leu | Val | Ala | Phe | Glu | Ala | Ser | Leu | Val | Gln | Gln | Gln |
|     |     |     | 100 |     |     |     |     |     | 105 |     |     |     | 110 |     |     |
| Met | Arg | Asn | Met | Ser | Glu | Ile | Arg | Lys | Met | Gly | Asn | Lys | Pro | His | Met |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Ile | Gln | Val | Tyr | Arg | Ser | Arg | Lys | Trp | Arg | Pro | Ile | Ala | Ser | Asp | Glu |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Ile | Val | Pro | Gly | Asp | Ile | Val | Ser | Ile | Gly | Glu | Ala | Gly | Phe | Arg | Ser |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Val | Pro | Val | Gly | Ala | Pro | Ala | Ser | Gly | Pro | Leu | Ala | Asn | Pro | Pro | Ala |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Ser | Ala | Leu | Gln | Ala | Ala | Pro | His | Arg | Arg | Thr | Trp | Cys | His | Val | Thr |

180  
Cys Phe Cys Cys Glu Ala Ala  
195

185

190

<210> 2329  
<211> 392  
<212> DNA  
<213> Homo sapiens

<400> 2329  
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tgggtgtccaa agccacgcac tagctgatcg gggagaaccg tcaccctcta ggctcgtgtc  
120  
atgagcacgc aaccactga ggaaccactc cgactagttg tggcattcaa tccagtgcct  
180  
agtgcctccc gggttgctca tcatcatgcg acgagatttc gcctggcggt gcaggccttc  
240  
attgtcgtcg tcattggtgg tttgttgtgg gcgttgacgg ccgacgcctt ccagttatcg  
300  
acgggtgatgt ggatgctcgg ggcattgggtg gtgctattcc tcgtgctttt cgtcatccag  
360  
aatctgcggc tgcacgccgc tcgcaaggat cc  
392

<210> 2330  
<211> 90  
<212> PRT  
<213> Homo sapiens

<400> 2330  
Met Ser Thr Gln Pro Thr Glu Glu Pro Leu Arg Leu Val Val Ala Phe  
1 5 10 15  
Asn Pro Val Pro Ser Ala Ser Arg Val Ala His His His Ala Thr Arg  
20 25 30  
Phe Arg Leu Ala Val Gln Ala Phe Ile Val Val Val Ile Gly Gly Leu  
35 40 45  
Leu Trp Ala Leu Thr Ala Asp Ala Phe Gln Leu Ser Thr Val Met Trp  
50 55 60  
Met Leu Gly Ala Trp Val Val Leu Phe Leu Val Leu Phe Val Ile Gln  
65 70 75 80  
Asn Leu Arg Leu His Ala Ala Arg Lys Asp  
85 90

<210> 2331  
<211> 2813  
<212> DNA  
<213> Homo sapiens

<400> 2331  
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gatttaagggt gcccgagtcc acgctgatgg actgccgtag acaactgaaa gacagtaagc  
120

aaattttatc tattacaaag aacttttaaag ttgagaatat tggacctctt cctataactg  
180  
tttcgtctct gaaaattaat gggataaact gccaaagtta tggattcgag gtgctggatt  
240  
gggattcagt ttcccttgga cccaaacaca tcccgcgata tcagcattgt gtccactcca  
300  
gactttacct cctcctgggt aattcgggac ctaagtcttg taaccgcagc ggacctagaa  
360  
tttcgcttca ctctcaatgt gactctccct catcacctgt tgcccttggtg tgcagacgtg  
420  
gttccaggac ccagctggga ggagtcattt tggaggtca cggctcttctt tgtcagtttg  
480  
tccttggttg gtgtgatttt aatagccttc caacaagcac agtacattct catggaattc  
540  
atgaaaacaa gacagaggca aaatgctagc tcctcttcac agcaaaacaa tggctctatg  
600  
gatgtaatca gccccattc ttacaaaagc aattgcaaga actttctcga tacatatggc  
660  
ccctctgata aaggcagggg gaagaactgc cttccagtga acactcccca aagcaggatc  
720  
cagaatgctg caaagaggag ccagccacc tatggtcatt ctcagaagaa gcacaaatgc  
780  
tcagtgtatt acagtaaaca caaaaccagc acagctgcgg ccagcagcac cagcacgact  
840  
actgagggaa aacagacttc acccctgggc agctcactgc ctgctgctaa agaggacatt  
900  
tgcactgatg ccatgcgtga gaactggatc agcctcagat atgcaagtgg cataaatgtc  
960  
aacctgcaga agaatttaac ctttcccaa aacttactga ataaagaaga aaacacactg  
1020  
aaaaacacaa ttgttttcag taatccttct tcagaatgta gtatgaagga gggaaatacag  
1080  
acatgtatgt ttcttaagga aactgacatt aaaacttcag agaacacagc tgagttcaag  
1140  
gaacgggagc tctgtccact gaagacctcc aagaaactac ctgaaaacca tttaccaaga  
1200  
aactcacctc agtaccacca gccagacttg ccagaaattt ccaggaaaaa taatgggaat  
1260  
aaccagcaag tacctgtcaa gaatgaagta gatcattgtg aaaatttgaa gaaggtggac  
1320  
acaaagcctt cttcagaaaa gaagattcac aaaacatcta gagaagacat gttttctgag  
1380  
aaacaggaca tacctttcgt agagcaagaa gatccttata ggaagaaaaa gcttcaggag  
1440  
aaaagagaag gaaatttaca aaatttaaag tggagtaaaa gtcgaacatg tagaaagaac  
1500  
aagaaaaggg gtgttgctcc agtctcaagg cctcctgaac agagtgatct aaagcttggtg  
1560  
tgcagtgact ttgagaggtc tgagctgagc agtgacatca atgtaagaag ctgggtgtata  
1620  
caggaaagca ctaggaggt ttgtaaagca gatgccgaaa ttgcaagcag tttacctgct  
1680  
gccagagag aggcagggtta ctaccagaag cctgagaaga aatgtgtgga caagttctgc  
1740

tccgattcca gctctgactg tgggagctcc tctggcagcg tgcgtgccag ccggggcagc  
 1800  
 tgggggagct ggagcagcac cagcagctcc gacggggata agaagcccat ggtggacgcc  
 1860  
 cagcaacttc tgccggccgg agacagtgtt tcacaaaatg attttccttc tgaagctccc  
 1920  
 atctccttga atctttctca taacatctgc aatcccatga ccgtgaatag tctcccacaa  
 1980  
 tacgcagagc cttcctgtcc cagccttctc gccggggcca caggtgttga agaagataaa  
 2040  
 ggtctttact cacctggaga cctgtggccc actccgccag tgtgtgtgac aagcagctta  
 2100  
 aactgcaccc tggagaacgg cgtgccttgt gtgattcagg agtcggcccc ggttcataat  
 2160  
 agtttcattg attggagtgc aacatgcgaa ggccagtttt ccagcgcata ctgtccattg  
 2220  
 gaattgaacg attacaatgc ctttccagaa gaaaacatga actatgccaa tggcttcccc  
 2280  
 tgtcctgcag atgttcagac agactttatt gatcacaact ctcaagtctac ctggaacacc  
 2340  
 ccaccaaca tgcttctgtc ctggggacat gccagtttca tcagctctcc gccctacctc  
 2400  
 acaagcacc gaagcttgtc tccaatgtct ggactttttg gttccatctg ggccccgcaa  
 2460  
 agcgatgtgt atgaaaattg ctgccccatc aacccccacca cggaacattc gaccacatg  
 2520  
 gaaaaccaag cggtcgtgtg caaggaatac taccgggggt tcaaccggtt tcgcgcctat  
 2580  
 atgaacctgg acatatggac taccacagcg aataggaatg caaatttccc actgtctaga  
 2640  
 gactcgagtt actgtgggaa tgtgtgaaaa taattggatt tttaaacaat gtgaataaag  
 2700  
 aggtctgtgt tttgattact agtgtaaact ggttattgag atagattatg acattggtgg  
 2760  
 atattttggc acttttatat gaaaataaat tttttaatga aaaaaaaaaa aaa  
 2813

<210> 2332

<211> 789

<212> PRT

<213> Homo sapiens

<400> 2332

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Asp | Phe | Thr | Ser | Ser | Trp | Val | Ile | Arg | Asp | Leu | Ser | Leu | Val | Thr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ala | Ala | Asp | Leu | Glu | Phe | Arg | Phe | Thr | Leu | Asn | Val | Thr | Leu | Pro | His |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| His | Leu | Leu | Pro | Leu | Cys | Ala | Asp | Val | Val | Pro | Gly | Pro | Ser | Trp | Glu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Glu | Ser | Phe | Trp | Arg | Leu | Thr | Val | Phe | Phe | Val | Ser | Leu | Ser | Leu | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Gly | Val | Ile | Leu | Ile | Ala | Phe | Gln | Gln | Ala | Gln | Tyr | Ile | Leu | Met | Glu |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Phe | Met | Lys | Thr | Arg | Gln | Arg | Gln | Asn | Ala | Ser | Ser | Ser | Ser | Gln | Gln |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| 85  |     |     |     |     |     |     |     |     |     | 90  |     |     |     |     | 95  |  |  |  |  |
| Asn | Asn | Gly | Pro | Met | Asp | Val | Ile | Ser | Pro | His | Ser | Tyr | Lys | Ser | Asn |  |  |  |  |
| 100 |     |     |     |     |     |     |     |     |     | 105 |     |     |     |     | 110 |  |  |  |  |
| Cys | Lys | Asn | Phe | Leu | Asp | Thr | Tyr | Gly | Pro | Ser | Asp | Lys | Gly | Arg | Gly |  |  |  |  |
| 115 |     |     |     |     |     |     |     |     |     | 120 |     |     |     |     | 125 |  |  |  |  |
| Lys | Asn | Cys | Leu | Pro | Val | Asn | Thr | Pro | Gln | Ser | Arg | Ile | Gln | Asn | Ala |  |  |  |  |
| 130 |     |     |     |     |     |     |     |     |     | 135 |     |     |     |     | 140 |  |  |  |  |
| Ala | Lys | Arg | Ser | Pro | Ala | Thr | Tyr | Gly | His | Ser | Gln | Lys | Lys | His | Lys |  |  |  |  |
| 145 |     |     |     |     |     |     |     |     |     | 150 |     |     |     |     | 155 |  |  |  |  |
| Cys | Ser | Val | Tyr | Tyr | Ser | Lys | His | Lys | Thr | Ser | Thr | Ala | Ala | Ala | Ser |  |  |  |  |
| 165 |     |     |     |     |     |     |     |     |     | 170 |     |     |     |     | 175 |  |  |  |  |
| Ser | Thr | Ser | Thr | Thr | Thr | Glu | Glu | Lys | Gln | Thr | Ser | Pro | Leu | Gly | Ser |  |  |  |  |
| 180 |     |     |     |     |     |     |     |     |     | 185 |     |     |     |     | 190 |  |  |  |  |
| Ser | Leu | Pro | Ala | Ala | Lys | Glu | Asp | Ile | Cys | Thr | Asp | Ala | Met | Arg | Glu |  |  |  |  |
| 195 |     |     |     |     |     |     |     |     |     | 200 |     |     |     |     | 205 |  |  |  |  |
| Asn | Trp | Ile | Ser | Leu | Arg | Tyr | Ala | Ser | Gly | Ile | Asn | Val | Asn | Leu | Gln |  |  |  |  |
| 210 |     |     |     |     |     |     |     |     |     | 215 |     |     |     |     | 220 |  |  |  |  |
| Lys | Asn | Leu | Thr | Leu | Pro | Lys | Asn | Leu | Leu | Asn | Lys | Glu | Glu | Asn | Thr |  |  |  |  |
| 225 |     |     |     |     |     |     |     |     |     | 230 |     |     |     |     | 235 |  |  |  |  |
| Leu | Lys | Asn | Thr | Ile | Val | Phe | Ser | Asn | Pro | Ser | Ser | Glu | Cys | Ser | Met |  |  |  |  |
| 245 |     |     |     |     |     |     |     |     |     | 250 |     |     |     |     | 255 |  |  |  |  |
| Lys | Glu | Gly | Ile | Gln | Thr | Cys | Met | Phe | Pro | Lys | Glu | Thr | Asp | Ile | Lys |  |  |  |  |
| 260 |     |     |     |     |     |     |     |     |     | 265 |     |     |     |     | 270 |  |  |  |  |
| Thr | Ser | Glu | Asn | Thr | Ala | Glu | Phe | Lys | Glu | Arg | Glu | Leu | Cys | Pro | Leu |  |  |  |  |
| 275 |     |     |     |     |     |     |     |     |     | 280 |     |     |     |     | 285 |  |  |  |  |
| Lys | Thr | Ser | Lys | Lys | Leu | Pro | Glu | Asn | His | Leu | Pro | Arg | Asn | Ser | Pro |  |  |  |  |
| 290 |     |     |     |     |     |     |     |     |     | 295 |     |     |     |     | 300 |  |  |  |  |
| Gln | Tyr | His | Gln | Pro | Asp | Leu | Pro | Glu | Ile | Ser | Arg | Lys | Asn | Asn | Gly |  |  |  |  |
| 305 |     |     |     |     |     |     |     |     |     | 310 |     |     |     |     | 315 |  |  |  |  |
| Asn | Asn | Gln | Gln | Val | Pro | Val | Lys | Asn | Glu | Val | Asp | His | Cys | Glu | Asn |  |  |  |  |
| 325 |     |     |     |     |     |     |     |     |     | 330 |     |     |     |     | 335 |  |  |  |  |
| Leu | Lys | Lys | Val | Asp | Thr | Lys | Pro | Ser | Ser | Glu | Lys | Lys | Ile | His | Lys |  |  |  |  |
| 340 |     |     |     |     |     |     |     |     |     | 345 |     |     |     |     | 350 |  |  |  |  |
| Thr | Ser | Arg | Glu | Asp | Met | Phe | Ser | Glu | Lys | Gln | Asp | Ile | Pro | Phe | Val |  |  |  |  |
| 355 |     |     |     |     |     |     |     |     |     | 360 |     |     |     |     | 365 |  |  |  |  |
| Glu | Gln | Glu | Asp | Pro | Tyr | Arg | Lys | Lys | Lys | Leu | Gln | Glu | Lys | Arg | Glu |  |  |  |  |
| 370 |     |     |     |     |     |     |     |     |     | 375 |     |     |     |     | 380 |  |  |  |  |
| Gly | Asn | Leu | Gln | Asn | Leu | Asn | Trp | Ser | Lys | Ser | Arg | Thr | Cys | Arg | Lys |  |  |  |  |
| 385 |     |     |     |     |     |     |     |     |     | 390 |     |     |     |     | 395 |  |  |  |  |
| Asn | Lys | Lys | Arg | Gly | Val | Ala | Pro | Val | Ser | Arg | Pro | Pro | Glu | Gln | Ser |  |  |  |  |
| 405 |     |     |     |     |     |     |     |     |     | 410 |     |     |     |     | 415 |  |  |  |  |
| Asp | Leu | Lys | Leu | Val | Cys | Ser | Asp | Phe | Glu | Arg | Ser | Glu | Leu | Ser | Ser |  |  |  |  |
| 420 |     |     |     |     |     |     |     |     |     | 425 |     |     |     |     | 430 |  |  |  |  |
| Asp | Ile | Asn | Val | Arg | Ser | Trp | Cys | Ile | Gln | Glu | Ser | Thr | Arg | Glu | Val |  |  |  |  |
| 435 |     |     |     |     |     |     |     |     |     | 440 |     |     |     |     | 445 |  |  |  |  |
| Cys | Lys | Ala | Asp | Ala | Glu | Ile | Ala | Ser | Ser | Leu | Pro | Ala | Ala | Gln | Arg |  |  |  |  |
| 450 |     |     |     |     |     |     |     |     |     | 455 |     |     |     |     | 460 |  |  |  |  |
| Glu | Ala | Gly | Tyr | Tyr | Gln | Lys | Pro | Glu | Lys | Lys | Cys | Val | Asp | Lys | Phe |  |  |  |  |
| 465 |     |     |     |     |     |     |     |     |     | 470 |     |     |     |     | 475 |  |  |  |  |
| Cys | Ser | Asp | Ser | Ser | Ser | Asp | Cys | Gly | Ser | Ser | Ser | Gly | Ser | Val | Arg |  |  |  |  |
| 485 |     |     |     |     |     |     |     |     |     | 490 |     |     |     |     | 495 |  |  |  |  |
| Ala | Ser | Arg | Gly | Ser | Trp | Gly | Ser | Trp | Ser | Ser | Thr | Ser | Ser | Ser | Asp |  |  |  |  |
| 500 |     |     |     |     |     |     |     |     |     | 505 |     |     |     |     | 510 |  |  |  |  |
| Gly | Asp | Lys | Lys | Pro | Met | Val | Asp | Ala | Gln | His | Phe | Leu | Pro | Ala | Gly |  |  |  |  |



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<210> 2333
<211> 501
<212> DNA
<213> Homo sapiens
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<400> 2333
cgtatgattg gtgtgggaca aatactattc aacaagagta cctaaatcat tgtttaaggc
60
gaagtaataa atatgaatgg ggtgtatcat ataatgaaca acgaatatcc atatagtgca
120
gacgaagttc ttcacaaagc aaaatcatat ttgtcagcag atgaatatga gtatgtttta
180
aaaagctatc atattgctta tgaagcacat aaaggtcagt tccgaaaaaa cggattacca
240
tacattatgc atcctataca agttgcaggt attttaacag aaatgcgatt agacggaccg
300
acgattgtcg caggtttttt gcatgatgta attgaagata caccgtatac atttgaagat
360
```

gtaaaagaaa tgttcaatga agaagttgct cgaattgttg atggtgtgac gaagcttaaa  
 420  
 aaaataaaat accgctcaaa agaagaacaa caagctgaaa atcatcgcaa gttatttatt  
 480  
 gcgattgcca aagatgtacg c  
 501

<210> 2334  
 <211> 143  
 <212> PRT  
 <213> Homo sapiens

<400> 2334  
 Met Asn Gly Val Tyr His Ile Met Asn Asn Glu Tyr Pro Tyr Ser Ala  
   1                  5                  10                  15  
 Asp Glu Val Leu His Lys Ala Lys Ser Tyr Leu Ser Ala Asp Glu Tyr  
                   20                  25                  30  
 Glu Tyr Val Leu Lys Ser Tyr His Ile Ala Tyr Glu Ala His Lys Gly  
           35                  40                  45  
 Gln Phe Arg Lys Asn Gly Leu Pro Tyr Ile Met His Pro Ile Gln Val  
   50                  55                  60  
 Ala Gly Ile Leu Thr Glu Met Arg Leu Asp Gly Pro Thr Ile Val Ala  
 65                  70                  75                  80  
 Gly Phe Leu His Asp Val Ile Glu Asp Thr Pro Tyr Thr Phe Glu Asp  
                   85                  90                  95  
 Val Lys Glu Met Phe Asn Glu Glu Val Ala Arg Ile Val Asp Gly Val  
           100                  105                  110  
 Thr Lys Leu Lys Lys Ile Lys Tyr Arg Ser Lys Glu Glu Gln Gln Ala  
           115                  120                  125  
 Glu Asn His Arg Lys Leu Phe Ile Ala Ile Ala Lys Asp Val Arg  
   130                  135                  140

<210> 2335  
 <211> 387  
 <212> DNA  
 <213> Homo sapiens

<400> 2335  
 ggatcctgag cgtggggact tctttgcact ccacagaacc ctcaattgta cctctacttt  
 60  
 tctctgcaga tggaccacac agcattcccc tgtggctgct gcagggaggg ctgtgagaac  
 120  
 cccatggggc gtgtggaatt taatcaggca agagttcaga cccatttcat ccacacactc  
 180  
 acccgctgac agttggaaca ggaggctgag agcttttaggg agctggaggc ccctgcccag  
 240  
 ggcagcccac ccagccctgg tgaggaggcc ctggtcccta ctttccact ggccaagccc  
 300  
 cccatgaaca atgagctggg agacaacagc tgcagcagcg acatgactga ttcttcaca  
 360  
 gcatcttcat cagcatcggg cactagt  
 387

<210> 2336

<211> 106  
 <212> PRT  
 <213> Homo sapiens

<400> 2336  
 Met Asp His Thr Ala Phe Pro Cys Gly Cys Cys Arg Glu Gly Cys Glu  
 1 5 10 15  
 Asn Pro Met Gly Arg Val Glu Phe Asn Gln Ala Arg Val Gln Thr His  
 20 25 30  
 Phe Ile His Thr Leu Thr Arg Leu Gln Leu Glu Gln Glu Ala Glu Ser  
 35 40 45  
 Phe Arg Glu Leu Glu Ala Pro Ala Gln Gly Ser Pro Pro Ser Pro Gly  
 50 55 60  
 Glu Glu Ala Leu Val Pro Thr Phe Pro Leu Ala Lys Pro Pro Met Asn  
 65 70 75 80  
 Asn Glu Leu Gly Asp Asn Ser Cys Ser Ser Asp Met Thr Asp Ser Ser  
 85 90 95  
 Thr Ala Ser Ser Ser Ala Ser Gly Thr Ser  
 100 105

<210> 2337  
 <211> 359  
 <212> DNA  
 <213> Homo sapiens

<400> 2337  
 ngagaagagg aggagtcac gccaggggcc gccatctcca gccctcgcca agccgctggg  
 60  
 accatgtgca gctcaagaat gccctccggc ccatcgccct cggggcaggg gaagggcagc  
 120  
 ttctctgcac cagcttcctt gctgggctcc agggcccaca ggctgaggcc gggggcccag  
 180  
 gggtaaatgc caggcaccct gctattgagg aacctatcca ggaggaagga ctggggcaga  
 240  
 cctgcgggat cctcgtcctc ccacgggtcc tcatggcaga agcagaagga gctggagtcg  
 300  
 ctgaggtccg tgggcaggcg ggctgggccc aacgtgggt caccgacctc ctcaaagct  
 359

<210> 2338  
 <211> 98  
 <212> PRT  
 <213> Homo sapiens

<400> 2338  
 Met Cys Ser Ser Arg Met Ala Ser Gly Pro Ser Ala Ser Gly Gln Gly  
 1 5 10 15  
 Lys Gly Ser Phe Ser Ala Pro Ala Ser Leu Leu Gly Ser Arg Ala His  
 20 25 30  
 Arg Leu Arg Pro Gly Ala Gln Gly Ser Met Pro Gly Thr Leu Leu Leu  
 35 40 45  
 Arg Asn Leu Ser Arg Arg Lys Asp Ser Gly Arg Pro Ala Gly Ser Ser  
 50 55 60  
 Ser Ser His Gly Ser Ser Trp Gln Lys Gln Lys Glu Leu Glu Ser Leu

```

65          70          75          80
Arg Ser Val Gly Arg Arg Ala Gly Pro Asn Val Gly Ser Pro Thr Ser
          85          90          95
Ser Lys

```

```
<210> 2339
<211> 439
<212> DNA
<213> Homo sapiens
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<400> 2339
acgcgtggcg tcagtcagg cagacttggg aggtcgcta caccgtcaac tcggttgca
60
ccctgtcctc cacccttcgtc gtcgcagtcg tcagtgctct gtggtttgtg ccctccgggc
120
actgggtccc gtagggcttg taatgctggg gcgctcggcg cgatgtgcca gtctcttggg
180
gagttactcc tctacactgg tgtgaacaag accggagaat tcccccccat attctcgttt
240
cccgtctgtc ccgcacgtca ttgggactgg cttttacgcg gtagtggttg ccgtactctg
300
gttgctctgc ggacgggtcg gcagggggat catgtcatga gtccgacggg gagcgagcgg
360
cgtcttagcg cgccaatgcg acgtggcatc gtggcactgt gcgtggcgat ggccttcgtg
420
ttgtcggggg gcggtgctg
439

```

```
<210> 2340
<211> 92
<212> PRT
<213> Homo sapiens
```

```

<400> 2340
Met Cys Gln Phe Leu Gly Glu Leu Leu Leu Tyr Thr Gly Val Asn Lys
  1                               5                               10                               15
Thr Gly Glu Phe Pro Pro Ile Phe Ser Phe Pro Ala Arg Pro Ala Arg
      20                               25                               30
His Trp Asp Trp Leu Leu Arg Gly Ser Gly Cys Arg Thr Leu Val Ala
      35                               40                               45
Leu Arg His Gly Arg Gln Gly Asp His Val Met Ser Pro Thr Val Ser
      50                               55                               60
Glu Arg Arg Leu Ser Ala Pro Met Arg Arg Gly Ile Val Ala Leu Cys
      65                               70                               75                               80
Val Ala Met Ala Phe Val Leu Ser Gly Cys Gly Ala
      85                               90

```

```
<210> 2341
<211> 411
<212> DNA
<213> Homo sapiens
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<400> 2341

gccaaacctc ccctccatcc tgcccaagat ggatcttget gagcctccct ggcatatgcc  
 60  
 tctgcaggag gagccagagg aggtcacgga ggaggaggag gaaagggaag aagaggagag  
 120  
 ggagaaggaa gcagaggagg aggaggaaga ggaagagctg ctcctgtgag cgggtcccca  
 180  
 ggagccaccg cacaggccca tgccccttca cctagcacca gcagcagcac cagcagccag  
 240  
 agtcctgggg ccacccggca caggcaggag gattctggag accaggccac atcaggcnat  
 300  
 ggaagtggag agcagtgtga aaccacctt gtcagtgcc tcagtcaccc caagtacagt  
 360  
 ggccccgggg gttcagaact atagccagga gtctgggggc actgagtggc n  
 411

<210> 2342

<211> 113

<212> PRT

<213> Homo sapiens

<400> 2342

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ser | Leu | Ala | Tyr | Ala | Ser | Ala | Gly | Gly | Ala | Arg | Gly | Gly | His | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Gly | Gly | Gly | Gly | Lys | Gly | Arg | Arg | Gly | Glu | Gly | Glu | Gly | Ser | Arg | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gly | Gly | Gly | Arg | Gly | Arg | Ala | Ala | Pro | Val | Ser | Gly | Ser | Pro | Gly | Ala |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Thr | Ala | Gln | Ala | His | Ala | Pro | Ser | Pro | Ser | Thr | Ser | Ser | Ser | Thr | Ser |
|     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |
| Ser | Gln | Ser | Pro | Gly | Ala | Thr | Arg | His | Arg | Gln | Glu | Asp | Ser | Gly | Asp |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Gln | Ala | Thr | Ser | Gly | Xaa | Gly | Ser | Gly | Glu | Gln | Cys | Glu | Thr | His | Leu |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Val | Ser | Ala | Leu | Ser | His | Pro | Lys | Tyr | Ser | Gly | Pro | Gly | Gly | Ser | Glu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

Leu

<210> 2343

<211> 522

<212> DNA

<213> Homo sapiens

<400> 2343

ggcccgagc agatgctgat gccttcacag tttcccaacc agggccagca gggattctct  
 60  
 ggaggccagg gaccctacca agccatgtcc caggacatgg gcaataccca agacatgttc  
 120  
 agccctgatc agagctcaat gcccatgagc aacgtgggca ccacccggct cagccacatg  
 180  
 cctctgcccc ctgcgtccaa tcctcctggg accgtgcatt cagccccaaa cggggggcta  
 240  
 ggcaggcggc cttcggacct caccatcagt attaatcaga tgggctcacc gggcatgggg  
 300

cacttgaagt cgcccaccct tagccagggtg cactcacccc tggtcacctc gccctctgcc  
 360  
 aacctcaagt caccacagac tccctcacag atggtgccct tgccttctgc caaccgcca  
 420  
 ggacctctca agtcgccccca ggtcctcggc tcctccctca gtgtccgttc acccactggc  
 480  
 tcgcccagca ggctcaagtc tccttccatg gcggtgcctt ct  
 522

<210> 2344

<211> 174

<212> PRT

<213> Homo sapiens

<400> 2344

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Pro | Gln | Lys | Met | Leu | Met | Pro | Ser | Gln | Phe | Pro | Asn | Gln | Gly | Gln |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Gln | Gly | Phe | Ser | Gly | Gly | Gln | Gly | Pro | Tyr | Gln | Ala | Met | Ser | Gln | Asp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Met | Gly | Asn | Thr | Gln | Asp | Met | Phe | Ser | Pro | Asp | Gln | Ser | Ser | Met | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Met | Ser | Asn | Val | Gly | Thr | Thr | Arg | Leu | Ser | His | Met | Pro | Leu | Pro | Pro |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Ala | Ser | Asn | Pro | Pro | Gly | Thr | Val | His | Ser | Ala | Pro | Asn | Arg | Gly | Leu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Gly | Arg | Arg | Pro | Ser | Asp | Leu | Thr | Ile | Ser | Ile | Asn | Gln | Met | Gly | Ser |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Pro | Gly | Met | Gly | His | Leu | Lys | Ser | Pro | Thr | Leu | Ser | Gln | Val | His | Ser |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Pro | Leu | Val | Thr | Ser | Pro | Ser | Ala | Asn | Leu | Lys | Ser | Pro | Gln | Thr | Pro |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Ser | Gln | Met | Val | Pro | Leu | Pro | Ser | Ala | Asn | Pro | Pro | Gly | Pro | Leu | Lys |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Ser | Pro | Gln | Val | Leu | Gly | Ser | Ser | Leu | Ser | Val | Arg | Ser | Pro | Thr | Gly |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Ser | Pro | Ser | Arg | Leu | Lys | Ser | Pro | Ser | Met | Ala | Val | Pro | Ser |     |     |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     |     |     |

<210> 2345

<211> 561

<212> DNA

<213> Homo sapiens

<400> 2345

nagatctccg tcttgatctt gagcaccgag gcactggggg gggaggacag cagccgcggg  
 60  
 ggctccacc agccgcgctc caggccgcct gggctcgacg cgctggacag gcgcccggcg  
 120  
 ctggcgctgc cgcccttttg ccgtttccgc cttttcttgc gcttctggtg cttgctggag  
 180  
 gcctgcgcgc ccgcctcgcc tgcgtgtcc gagtccttgg cgctgtcgga cgtgagtgc  
 240  
 tcgcagttct gcagccgcag gtccgactcg ctctccacca tagctattaa tgccaagaat  
 300

gcaaataaaa agaataatcat ctgggtgaat taccttctta gcaatcctga gtacaaggac  
 360  
 acacccatgg acatcgaca gctcccccat ctgccggaga aaacttccga atcctcggag  
 420  
 acatccgact ctgagtcaga ctctaaagac acctcaggta ttacagagga caacgagaac  
 480  
 tccaagnntc cgacgagaag gggaaccagt ccgagaacag cgaagaccg gagccccgacc  
 540  
 ggaagaagtc gggcaacgcg t  
 561

<210> 2346

<211> 187

<212> PRT

<213> Homo sapiens

<400> 2346

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Ile | Ser | Val | Leu | Ile | Leu | Ser | Thr | Glu | Ala | Leu | Gly | Gly | Glu | Asp |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ser | Ser | Arg | Gly | Gly | Leu | His | Gln | Pro | Ala | Ser | Arg | Pro | Pro | Gly | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Asp | Ala | Leu | Asp | Arg | Arg | Arg | Arg | Leu | Ala | Leu | Pro | Pro | Phe | Cys | Arg |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Phe | Arg | Leu | Phe | Leu | Arg | Phe | Trp | Cys | Leu | Leu | Glu | Ala | Cys | Ala | Pro |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Ala | Ser | Pro | Ala | Leu | Ser | Glu | Ser | Leu | Ala | Leu | Ser | Asp | Val | Ser | Asp |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Ser | Gln | Phe | Cys | Ser | Arg | Arg | Ser | Asp | Ser | Leu | Ser | Thr | Ile | Ala | Ile |
|     |     |     |     | 85  |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Asn | Ala | Lys | Asn | Ala | Asn | Glu | Lys | Asn | Ile | Ile | Trp | Val | Asn | Tyr | Leu |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Leu | Ser | Asn | Pro | Glu | Tyr | Lys | Asp | Thr | Pro | Met | Asp | Ile | Ala | Gln | Leu |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Pro | His | Leu | Pro | Glu | Lys | Thr | Ser | Glu | Ser | Ser | Glu | Thr | Ser | Asp | Ser |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Glu | Ser | Asp | Ser | Lys | Asp | Thr | Ser | Gly | Ile | Thr | Glu | Asp | Asn | Glu | Asn |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Ser | Lys | Xaa | Pro | Thr | Arg | Arg | Gly | Thr | Ser | Pro | Arg | Thr | Ala | Lys | Thr |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Arg | Ser | Pro | Thr | Gly | Arg | Ser | Arg | Ala | Thr | Arg |     |     |     |     |     |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     |     |     |     |

<210> 2347

<211> 375

<212> DNA

<213> Homo sapiens

<400> 2347

atcagcgaag aacacggcag gaccctggaa gacgccgccg gtgaattgaa gcggtggtatc  
 60  
 gagaacgtcg agtacgcctg cgccgcgccg gaagtactga aggggtgaata cagccgtaac  
 120  
 gtcggtccga acatcgacgc ctggtccgat ttccagccgc tgggcgtggt ggcggggatc  
 180

acgccattca acttcccggc gatggtgccc ctgtggatgt atccgttggc gatcgtttgc  
 240  
 ggtaactgct ttatcctcaa gccgtccgag cgtgatccga gctcgacctt gctgatcgcc  
 300  
 cagctgttgc aggaagccgg ttgccccaaa ggtgtgctga acgtggtgca tggtgacaag  
 360  
 accgcggtgg acgcg  
 375

<210> 2348  
 <211> 125  
 <212> PRT  
 <213> Homo sapiens

<400> 2348  
 Ile Ser Glu Glu His Gly Arg Thr Leu Glu Asp Ala Ala Gly Glu Leu  
 1 5 10 15  
 Lys Arg Gly Ile Glu Asn Val Glu Tyr Ala Cys Ala Ala Pro Glu Val  
 20 25 30  
 Leu Lys Gly Glu Tyr Ser Arg Asn Val Gly Pro Asn Ile Asp Ala Trp  
 35 40 45  
 Ser Asp Phe Gln Pro Leu Gly Val Val Ala Gly Ile Thr Pro Phe Asn  
 50 55 60  
 Phe Pro Ala Met Val Pro Leu Trp Met Tyr Pro Leu Ala Ile Val Cys  
 65 70 75 80  
 Gly Asn Cys Phe Ile Leu Lys Pro Ser Glu Arg Asp Pro Ser Ser Thr  
 85 90 95  
 Leu Leu Ile Ala Gln Leu Leu Gln Glu Ala Gly Leu Pro Lys Gly Val  
 100 105 110  
 Leu Asn Val Val His Gly Asp Lys Thr Ala Val Asp Ala  
 115 120 125

<210> 2349  
 <211> 417  
 <212> DNA  
 <213> Homo sapiens

<400> 2349  
 nnnaaaaaaaa aaaaaacacaa tatttaatgg acgcggttta ttcagcaggt  
 60  
 gctgacaaag tttttggtgt cccaggagat tttaatctag cctttttaga tgatattatt  
 120  
 gcacataatc atattaaatg gattggtaat acaaatgaac ttaatgcaag ttatgccgct  
 180  
 gacggatatg cacgtattaa tggcatcggt gcaatggtaa caacatttgg agtgggtgaa  
 240  
 ttaagtgctg tcaacggaat cgctggatct tatgtgagc gtgtaccagt tattgccatc  
 300  
 actggggcac ctactcgagc tgtagaacia gaaggcaaat acgttcacca ttcccttggc  
 360  
 gaaggaactt ttgatgatta tagaaaaatg tttagacctt ttacaacagc gcaagct  
 417

<210> 2350



<211> 139  
 <212> PRT  
 <213> Homo sapiens

<400> 2350

```

Xaa Lys Lys Lys Lys Lys Lys Lys Thr Gln Tyr Leu Met Asp Ala Val
 1           5           10           15
Tyr Ser Ala Gly Ala Asp Lys Val Phe Gly Val Pro Gly Asp Phe Asn
      20           25           30
Leu Ala Phe Leu Asp Asp Ile Ile Ala His Asn His Ile Lys Trp Ile
      35           40           45
Gly Asn Thr Asn Glu Leu Asn Ala Ser Tyr Ala Ala Asp Gly Tyr Ala
      50           55           60
Arg Ile Asn Gly Ile Gly Ala Met Val Thr Thr Phe Gly Val Gly Glu
      65           70           75           80
Leu Ser Ala Val Asn Gly Ile Ala Gly Ser Tyr Ala Glu Arg Val Pro
      85           90           95
Val Ile Ala Ile Thr Gly Ala Pro Thr Arg Ala Val Glu Gln Glu Gly
      100          105          110
Lys Tyr Val His His Ser Leu Gly Glu Gly Thr Phe Asp Asp Tyr Arg
      115          120          125
Lys Met Phe Glu Pro Ile Thr Thr Ala Gln Ala
      130          135

```

<210> 2351  
 <211> 696  
 <212> DNA  
 <213> Homo sapiens

<400> 2351

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nacgcgttgcc cgcgcgataa ctctggtgag ggtcttgctg gggccctgct ggcccttggt
60
ggctccgccc agctgtgcga cgttccctgg atcaccgacc agtatgaccg gttcgtgcgt
120
ggcaataactg tgctcgctca gccgaatgat gccggcatga ttcgtattga cgacaacctc
180
ggcatcgcgcc tgccttgga cgtaacgga cgccagacca cccttaaccc gtatcttggc
240
gcccagctgg ctctttgcga ggcttaccgg aatgtggctg tctctggcgc aactccggtg
300
gctgtcactg attgcctcaa ttatggctcc ccgtacgacc ccgatgtcat gtggcaattc
360
gacgagacca tccttggtct ggttgacggc tgccgcgagc ttggcgtgcc gggtacgggc
420
ggtaacgttt ccctgcacaa ccgcactgga gatgagtcga ttcggcctac tccgctcggt
480
ggtgtgctcg gcgttattga tgacgtgcat cgtcgcatcc cgtcggcctt cgcacacgac
540
ggcgacgctg tcttgctgct aggaacgacg aagtgcgagt tcggcggatc ggtctatgag
600
gacgtcatcc acgctggcca cctaggcggt atgccccga tggccgacct gaatgccgag
660
aaggccctgg ccgcggtgat ggtggaagcg tcgaag
696

```

<210> 2352  
 <211> 232  
 <212> PRT  
 <213> Homo sapiens

<400> 2352  
 Xaa Ala Leu Pro Arg Asp Asn Ser Gly Glu Gly Leu Ala Gly Ala Leu  
 1 5 10 15  
 Leu Ala Leu Val Gly Ser Ala Gln Leu Cys Asp Arg Ser Trp Ile Thr  
 20 25 30  
 Asp Gln Tyr Asp Arg Phe Val Arg Gly Asn Thr Val Leu Ala Gln Pro  
 35 40 45  
 Asn Asp Ala Gly Met Ile Arg Ile Asp Asp Asn Leu Gly Ile Ala Leu  
 50 55 60  
 Ser Leu Asp Ala Asn Gly Arg Gln Thr Thr Leu Asn Pro Tyr Leu Gly  
 65 70 75 80  
 Ala Gln Leu Ala Leu Cys Glu Ala Tyr Arg Asn Val Ala Val Ser Gly  
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 Ala Thr Pro Val Ala Val Thr Asp Cys Leu Asn Tyr Gly Ser Pro Tyr  
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 Asp Pro Asp Val Met Trp Gln Phe Asp Glu Thr Ile Leu Gly Leu Val  
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 Asp Gly Cys Arg Glu Leu Gly Val Pro Val Thr Gly Gly Asn Val Ser  
 130 135 140  
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 145 150 155 160  
 Gly Val Leu Gly Val Ile Asp Asp Val His Arg Arg Ile Pro Ser Ala  
 165 170 175  
 Phe Ala His Asp Gly Asp Ala Val Leu Leu Leu Gly Thr Thr Lys Cys  
 180 185 190  
 Glu Phe Gly Gly Ser Val Tyr Glu Asp Val Ile His Ala Gly His Leu  
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 Arg Met Val Asp Gln Ala Ile Thr Glu Leu Gly Ser Val Asp Val Leu  
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 Glu Glu Asp Phe Glu Lys Val Ile Lys Ile Asn Leu Thr Gly Ala Phe  
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<210> 2355  
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&lt;210&gt; 2356

&lt;211&gt; 1000

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

<400> 2356  
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 Leu Ser Asn Gln Asn Met Leu Leu Arg Gly Cys Val Leu Arg Asn Thr  
 35 40 45  
 Glu Trp Cys Phe Gly Leu Val Ile Phe Ala Gly Pro Asp Thr Lys Leu  
 50 55 60  
 Met Gln Asn Ser Gly Arg Thr Lys Phe Lys Arg Thr Ser Ile Asp Arg  
 65 70 75 80  
 Leu Met Asn Thr Leu Val Leu Trp Ile Phe Gly Phe Leu Val Cys Met  
 85 90 95  
 Gly Val Ile Leu Ala Ile Gly Asn Ala Ile Trp Glu His Glu Val Gly  
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 Met Arg Phe Gln Val Tyr Leu Pro Trp Asp Glu Ala Val Asp Ser Ala  
 115 120 125  
 Phe Phe Ser Gly Phe Leu Ser Phe Trp Ser Tyr Ile Ile Ile Leu Asn  
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 Thr Val Val Pro Ile Ser Leu Tyr Val Ser Val Glu Val Ile Arg Leu  
 145 150 155 160  
 Gly His Ser Tyr Phe Ile Asn Trp Asp Lys Lys Met Phe Cys Met Lys  
 165 170 175  
 Lys Arg Thr Pro Ala Glu Ala Arg Thr Thr Thr Leu Asn Glu Glu Leu  
 180 185 190  
 Gly Gln Val Glu Tyr Ile Phe Ser Asp Lys Thr Gly Thr Leu Thr Gln  
 195 200 205  
 Asn Ile Met Val Phe Asn Lys Cys Ser Ile Asn Gly His Ser Tyr Gly  
 210 215 220  
 Asp Val Phe Asp Val Leu Gly His Lys Ala Glu Leu Gly Glu Arg Pro  
 225 230 235 240  
 Glu Pro Val Asp Phe Ser Phe Asn Pro Leu Ala Asp Lys Lys Phe Leu  
 245 250 255  
 Phe Trp Asp Pro Ser Leu Leu Glu Ala Val Lys Ile Gly Asp Pro His  
 260 265 270  
 Thr His Glu Phe Phe Arg Leu Leu Ser Leu Cys His Thr Val Met Ser  
 275 280 285  
 Glu Glu Lys Asn Glu Gly Glu Leu Tyr Tyr Lys Ala Gln Ser Pro Asp  
 290 295 300  
 Glu Gly Ala Leu Val Thr Ala Ala Arg Asn Phe Gly Phe Val Phe Arg  
 305 310 315 320  
 Ser Arg Thr Pro Lys Thr Ile Thr Val His Glu Met Gly Thr Ala Ile  
 325 330 335  
 Thr Tyr Gln Leu Leu Ala Ile Leu Asp Phe Asn Asn Ile Arg Lys Arg  
 340 345 350  
 Met Ser Val Ile Val Arg Asn Pro Glu Gly Lys Ile Arg Leu Tyr Cys  
 355 360 365  
 Lys Gly Ala Asp Thr Ile Leu Leu Asp Arg Leu His His Ser Thr Gln  
 370 375 380  
 Glu Leu Leu Asn Thr Thr Met Asp His Leu Asn Glu Tyr Ala Gly Glu  
 385 390 395 400  
 Gly Leu Arg Thr Leu Val Leu Ala Tyr Lys Asp Leu Asp Glu Glu Tyr  
 405 410 415  
 Tyr Glu Glu Trp Ala Glu Arg Arg Leu Gln Ala Ser Leu Ala Gln Asp

1721



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| 850   | 855 | 860  |
| Gly Asn Ala Gln Asn Thr Leu Ala Gln Pro Thr Val Trp Leu Thr Ile |     |      |
| 865   | 870 | 875  |
| Val Leu Thr Thr Val Val Cys Ile Met Pro Val Val Ala Phe Arg Phe |     | 880  |
|   | 885 | 890  |
| Leu Arg Leu Asn Leu Lys Pro Asp Leu Ser Asp Thr Val Arg Tyr Thr |     | 895  |
|   | 900 | 905  |
| Gln Leu Val Arg Lys Lys Gln Lys Ala Gln His Arg Cys Met Arg Arg |     | 910  |
|   | 915 | 920  |
| Val Gly Arg Thr Gly Ser Arg Arg Ser Gly Tyr Ala Phe Ser His Gln |     | 925  |
|   | 930 | 935  |
| Glu Gly Phe Gly Glu Leu Ile Met Ser Gly Lys Asn Met Arg Leu Ser |     | 940  |
| 945   | 950 | 955  |
| Ser Leu Ala Leu Ser Ser Phe Thr Thr Arg Ser Ser Ser Ser Trp Ile |     | 960  |
|   | 965 | 970  |
| Glu Ser Leu Arg Arg Lys Lys Ser Asp Ser Ala Ser Ser Pro Ser Gly |     | 975  |
|   | 980 | 985  |
| Gly Ala Asp Lys Pro Leu Lys Gly                                 |     | 990  |
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<210> 2358  
 <211> 98  
 <212> PRT  
 <213> Homo sapiens

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 Asn Glu Thr Gly Gly Thr Lys Val Ile Thr Ala Leu Phe Ala Gly Leu  
 35 40 45  
 Val Tyr Tyr Asp Ala Asp Gly Lys Thr His Asn Asp Val Ala Lys Ser

|   |    |    |
|---|----|----|
| 50  | 55 | 60 |
| Ile Asp Phe Asp Gly Asp Arg Thr Tyr Thr Val Thr Leu Arg Lys Thr |    |    |
| 65  | 70 | 75 |
| Arg Phe Ala Asp Gly Thr Glu Val Lys Ala His Asn Phe Val Lys Ala |    | 80 |
|   | 85 | 90 |
|   |    | 95 |

Ala Ala

<210> 2359  
 <211> 324  
 <212> DNA  
 <213> Homo sapiens

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 180  
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 <212> PRT  
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<400> 2360  
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 35 40 45  
 Glu Trp Ile His His Ala Arg Arg Arg Ile Ala Gly Ile Val Ile Asn  
 50 55 60  
 Pro Gly Ala Trp Thr His Thr Ser Ala Ala Ile His Asp Ala Leu Ile  
 65 70 75 80  
 Ala Ala Glu Val Pro Val Ile Glu Val His Ile Ser Asn Val His Arg  
 85 90 95  
 Arg Glu Asp Phe Arg His Phe Ser Tyr Val Ser Arg  
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<210> 2361  
 <211> 398  
 <212> DNA  
 <213> Homo sapiens

<400> 2361

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 240  
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 300  
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 398

<210> 2362

<211> 98

<212> PRT

<213> Homo sapiens

<400> 2362

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| Met | Pro | Leu | Pro | Ser | Arg | Ser | Thr | Gln | Thr | Ser | Trp | Ser | Arg | Gly | Thr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ser | Ile | Pro | Ala | Leu | Ser | Ser | Arg | Ser | Cys | Arg | Glu | Ser | Pro | Lys | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Arg | Trp | Trp | Gly | Trp | Gly | Leu | Gln | Gln | Leu | Gly | Pro | Leu | Ile | Ser | Leu |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Lys | Ala | Gln | Gln | His | Thr | Val | Ser | Gln | Val | Cys | Gln | Val | Pro | Gln | His |
|     |     |     | 50  |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Gly | His | Pro | Ala | Leu | Thr | Ala | Pro | Pro | Arg | Leu | Pro | Ala | Cys | His | His |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Leu | His | Lys | His | Met | Leu | Gln | Leu | His | Thr | Arg | Glu | Thr | Pro | His | Ala |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

Arg Phe

<210> 2363

<211> 833

<212> DNA

<213> Homo sapiens

<400> 2363

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 ggcgcaaca gctggctgat ggtgacatgc tgcagcctgg tcacatcaga aaccatgagg  
 780  
 gtggatctcc ggaggtcatc gatgtggaca gactgccaca gcccttcacg cgt  
 833

&lt;210&gt; 2364

&lt;211&gt; 135

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2364

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Thr | Pro | Leu | Ala | Pro | Asn | Ala | Lys | Ala | Phe | Lys | Asp | Ala | Ala | Gln |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Lys | His | His | Gln | Gln | His | Lys | Gly | Arg | Ser | Gln | Glu | Pro | Glu | Leu | Thr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ser | Leu | Pro | Pro | Ser | Ser | Glu | Val | Ser | Phe | Pro | Thr | Phe | Ser | Glu | Leu |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ser | Val | Ser | Met | Ala | Ser | Ser | Ala | Thr | Ser | Ala | Thr | Ser | Pro | Asp | Val |
|     |     |     | 50  |     |     |     | 55  |     |     |     | 60  |     |     |     |     |
| Leu | Ala | Ser | Val | Ser | Ile | Ala | Ser | Ser | Trp | Arg | Ser | Ser | Ala | Arg | Cys |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Ser | Lys | Pro | Thr | Ala | Xaa | Arg | Ser | Lys | Arg | Asp | Cys | Val | Thr | Thr | Gln |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Lys | Val | Ala | Gln | Gly | Leu | Ala | Ala | Val | Pro | Ser | Gly | Ser | Leu | Cys | Ala |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Gln | Pro | Pro | Ser | Ala | Gly | Phe | Pro | Gly | Pro | Cys | Cys | Gly | Ala | Arg | Ser |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     |     | 125 |     |     |
| Pro | Asp | Glu | Arg | Ser | Arg | Ser |     |     |     |     |     |     |     |     |     |
|     |     |     | 130 |     |     | 135 |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 2365

&lt;211&gt; 429

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2365

accggtgccc agtccccacg gctcgtccag acctacgttg agaaacttcg acgagacagt  
 60  
 ctccgtcagt tcgccaaca acctctgaac gaagtaaga ttctccggca ctggagccaa  
 120  
 ggtgcttgcc ctggcatgaa cgccccaggg gaggtcgacg ccgtcgggat tctcacaccg  
 180

atggtgatgg gactcggttt ccaaccacgg ttccatgtga cccagacagt tctgggtggc  
 240  
 cccgagctcg atgcctcgtc cgcgacacag accatcgagc cacctcatgt cctccgccgt  
 300  
 cacggggctg cggtcggccc acacctcttc ctcaccgagg taggcaaata ccgcttcacc  
 360  
 atagagctca aggtgattga gaccacaccg cgccatgacg cgcgtcagga aatcaagagt  
 420  
 ggaacgcgt  
 429

<210> 2366  
 <211> 132  
 <212> PRT  
 <213> Homo sapiens

<400> 2366  
 Met Ala Arg Cys Gly Leu Asn His Leu Glu Leu Tyr Gly Glu Ala Gly  
 1 5 10 15  
 Phe Ala Tyr Arg Gly Glu Glu Val Trp Ala Asp Arg Ser Pro Val  
 20 25 30  
 Thr Ala Glu Asp Met Arg Trp Leu Asp Gly Leu Cys Arg Gly Arg Gly  
 35 40 45  
 Ile Glu Leu Gly Ala Asn Gln Asn Cys Leu Gly His Met Glu Pro Trp  
 50 55 60  
 Leu Glu Thr Glu Ser His His His Arg Cys Glu Asn Pro Asp Gly Val  
 65 70 75 80  
 Asp Leu Pro Trp Gly Val His Ala Arg Ala Ser Thr Leu Ala Pro Val  
 85 90 95  
 Pro Glu Asn Leu Asp Phe Val Gln Arg Leu Leu Gly Glu Leu Thr Glu  
 100 105 110  
 Thr Val Ser Ser Lys Phe Leu Asn Val Gly Leu Asp Glu Pro Trp Glu  
 115 120 125  
 Leu Gly Thr Gly  
 130

<210> 2367  
 <211> 474  
 <212> DNA  
 <213> Homo sapiens

<400> 2367  
 ngtgcacggg agaagacgtg cgcgacgttc ggcggaacct atccgggttc ggccggcagt  
 60  
 ggggggtcacg agctcaccga cgcgcgcgcg ttgcctcgt gggggtcga tttcgtcaaa  
 120  
 tacgatcggg gctccggtga ctccgcgcac gacgaccagg tcgcctcgtt caccgcgatg  
 180  
 cgtgacgcaa tccgatccac cggacgcccc atggtgtaca gcatcaaccc caacagcgaa  
 240  
 tcgcccgatc ggtccggagc ccaattcgat tggggcggtg tggcaaccat gacacgtacc  
 300  
 accaaccgaca tctcgccggt gtggaccact cgcccgccg gtgcccgatgc gacaccggca  
 360

tcgggggtatc aggggatccg cgacatcatc gacgccgtgg ccccgatcgg cgcacgggtt  
 420  
 gcgacggcag cttcgtcgac atggacatgc tcgtcgtcgg tgtcggcaac gcgt  
 474

<210> 2368  
 <211> 158  
 <212> PRT  
 <213> Homo sapiens

<400> 2368  
 Xaa Ala Arg Glu Lys Thr Cys Ala Gln Phe Gly Gly Thr Tyr Pro Gly  
 1 5 10 15  
 Ser Ala Gly Ser Gly Gly His Glu Leu Thr Asp Ala Arg Ala Phe Ala  
 20 25 30  
 Ser Trp Gly Val Asp Phe Val Lys Tyr Asp Arg Cys Ser Gly Asp Ser  
 35 40 45  
 Ala His Asp Asp Gln Val Ala Ser Phe Thr Ala Met Arg Asp Ala Ile  
 50 55 60  
 Arg Ser Thr Gly Arg Pro Met Val Tyr Ser Ile Asn Pro Asn Ser Glu  
 65 70 75 80  
 Ser Pro Asp Arg Ser Gly Ala Gln Phe Asp Trp Gly Gly Val Ala Thr  
 85 90 95  
 Met Thr Arg Thr Thr Asn Asp Ile Ser Pro Val Trp Thr Thr Arg Pro  
 100 105 110  
 Ala Gly Ala Asp Ala Thr Pro Ala Ser Gly Tyr Gln Gly Ile Arg Asp  
 115 120 125  
 Ile Ile Asp Ala Val Ala Pro Ile Gly Ala Arg Val Ala Thr Ala Ala  
 130 135 140  
 Ser Ser Thr Trp Thr Cys Ser Ser Ser Val Ser Ala Thr Arg  
 145 150 155

<210> 2369  
 <211> 408  
 <212> DNA  
 <213> Homo sapiens

<400> 2369  
 ctgaatggca ggcaggcaga ggccaccaga gccagccccc cgagaagccc tgctgagcca  
 60  
 aaggggagcg ccctgggacc taaccagag ccccatctca ccttcccccg ttctttcaaa  
 120  
 gtgectcccc caacccagc caggacttcg tccatcccag ttcaggaagc acaagaggct  
 180  
 cccgaaagga agagggggcc accaagaagg ctcccagccg actcccactg cctcccagct  
 240  
 tccacatccg ccccgctcc caggtctacc cagacagggc ccccgagcnc agactgcctt  
 300  
 ggggagctca aggccacagc accagccagc ccaaggcttg gccagtccca gtcccaagca  
 360  
 gatgaacgag ctgggactcc gcctccagcc cctcccctgc cccctcct  
 408

<210> 2370

<211> 136  
 <212> PRT  
 <213> Homo sapiens

<400> 2370  
 Leu Asn Gly Arg Gln Ala Glu Ala Thr Arg Ala Ser Pro Pro Arg Ser  
 1 5 10 15  
 Pro Ala Glu Pro Lys Gly Ser Ala Leu Gly Pro Asn Pro Glu Pro His  
 20 25 30  
 Leu Thr Phe Pro Arg Ser Phe Lys Val Pro Pro Pro Thr Pro Val Arg  
 35 40 45  
 Thr Ser Ser Ile Pro Val Gln Glu Ala Gln Glu Ala Pro Glu Arg Lys  
 50 55 60  
 Arg Gly Pro Pro Arg Arg Leu Pro Ala Asp Ser His Cys Leu Pro Ala  
 65 70 75 80  
 Ser Thr Ser Ala Pro Pro Pro Arg Ser Thr Gln Thr Gly Pro Pro Ser  
 85 90 95  
 Xaa Asp Cys Pro Gly Glu Leu Lys Ala Thr Ala Pro Ala Ser Pro Arg  
 100 105 110  
 Leu Gly Gln Ser Gln Ser Gln Ala Asp Glu Arg Ala Gly Thr Pro Pro  
 115 120 125  
 Pro Ala Pro Pro Leu Pro Pro Pro  
 130 135

<210> 2371  
 <211> 327  
 <212> DNA  
 <213> Homo sapiens

<400> 2371  
 gaattcgggtg tgcgatgcga gcctgcagcc tgggagcaga gacaaggagc aaaggcgggtg  
 60  
 agagggttgc cagggcaccc agttacagct ggagctgcag gggacccatc cctcgagaga  
 120  
 ggcaggcact agtcatgagg caagagatgc ctcagaagag gatgctggcc gcagggcaca  
 180  
 gcagagaggg agatagcccc gggcactcct caggaccggg cctcagggga cagcaaacaa  
 240  
 gattcctgat agacgcgccc aggtcatgcc ttttcagtgg tgtgagccag gttctggcgt  
 300  
 caggcggggc aaggttttca tgcagcn  
 327

<210> 2372  
 <211> 104  
 <212> PRT  
 <213> Homo sapiens

<400> 2372  
 Met Arg Ala Cys Ser Leu Gly Ala Glu Thr Arg Ser Lys Gly Gly Glu  
 1 5 10 15  
 Arg Val Ala Arg Ala Pro Ser Tyr Ser Trp Ser Cys Arg Gly Pro Ile  
 20 25 30  
 Pro Arg Glu Arg Gln Ala Leu Val Met Arg Gln Glu Met Pro Gln Lys

```

          35          40          45
Arg Met Leu Ala Ala Gly His Ser Arg Glu Gly Asp Ser Pro Gly His
    50          55          60
Ser Ser Gly Pro Gly Leu Arg Gly Gln Gln Thr Arg Phe Leu Ile Asp
65          70          75          80
Ala Pro Arg Ser Cys Leu Phe Ser Gly Val Ser Gln Val Leu Ala Ser
          85          90          95
Gly Gly Pro Arg Phe Ser Cys Ser
          100

```

<210> 2373  
 <211> 591  
 <212> DNA  
 <213> Homo sapiens

```

<400> 2373
gaattctgac attcaggaag tcaattgcag aaggtttaac caagttgatt ctgttttacc
60
aatcctgtc tattctgaaa agcgccaat gccagactca tctcatgatg tgaaagttct
120
cacttcaaag acatcagctg ttgagatgac ccaggcagta ttgaatactc agctttcatc
180
agaaaatgtt accaaagttg agcaaaattc accagcagtt tgtgaaacaa tttctgttcc
240
caagtccatg tccactgagg aatataaatc aaaaattcaa aatgaaaata tgctacttct
300
cgctttgctt tcacaggcac gtaagactca gaagacagta ttaaaagatg ctaatcaaac
360
tattcaggat tctaaaccag acagttgtga aatgaatcca aatacccaaa tgactggtaa
420
ccaactgaat ttgaagaaca tggaaactcc aagtacttct aatgtaagtg gcagggtttt
480
ggacaactcc ttttgcagtg gacaagaatc ctcaacaaaa ggaatgcctg ctaaaagtga
540
cagtagctgt tccatggaag tgctagcaac ctgtctttcc ctgtggaaaa a
591

```

<210> 2374  
 <211> 167  
 <212> PRT  
 <213> Homo sapiens

```

<400> 2374
Met Pro Asp Ser Ser His Asp Val Lys Val Leu Thr Ser Lys Thr Ser
1          5          10          15
Ala Val Glu Met Thr Gln Ala Val Leu Asn Thr Gln Leu Ser Ser Glu
20          25          30
Asn Val Thr Lys Val Glu Gln Asn Ser Pro Ala Val Cys Glu Thr Ile
35          40          45
Ser Val Pro Lys Ser Met Ser Thr Glu Glu Tyr Lys Ser Lys Ile Gln
50          55          60
Asn Glu Asn Met Leu Leu Leu Ala Leu Leu Ser Gln Ala Arg Lys Thr
65          70          75          80
Gln Lys Thr Val Leu Lys Asp Ala Asn Gln Thr Ile Gln Asp Ser Lys

```



|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
|     |     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |  |  |  |  |
| Pro | Asp | Ser | Cys | Glu | Met | Asn | Pro | Asn | Thr | Gln | Met | Thr | Gly | Asn | Gln |  |  |  |  |
|     |     |     |     | 100 |     |     |     |     |     | 105 |     |     |     | 110 |     |  |  |  |  |
| Leu | Asn | Leu | Lys | Asn | Met | Glu | Thr | Pro | Ser | Thr | Ser | Asn | Val | Ser | Gly |  |  |  |  |
|     |     |     |     | 115 |     |     |     |     |     | 120 |     |     |     | 125 |     |  |  |  |  |
| Arg | Val | Leu | Asp | Asn | Ser | Phe | Cys | Ser | Gly | Gln | Glu | Ser | Ser | Thr | Lys |  |  |  |  |
|     |     |     |     | 130 |     |     | 135 |     |     |     |     |     | 140 |     |     |  |  |  |  |
| Gly | Met | Pro | Ala | Lys | Ser | Asp | Ser | Ser | Cys | Ser | Met | Glu | Val | Leu | Ala |  |  |  |  |
|     |     |     |     |     |     | 150 |     |     |     | 155 |     |     |     |     | 160 |  |  |  |  |
| Thr | Cys | Leu | Ser | Leu | Trp | Lys |     |     |     |     |     |     |     |     |     |  |  |  |  |
|     |     |     |     |     |     | 165 |     |     |     |     |     |     |     |     |     |  |  |  |  |

<210> 2375  
 <211> 535  
 <212> DNA  
 <213> Homo sapiens

<400> 2375  
 ntggccatgt cggtgctcag cagcggcacc ctggacagtt accttgagcg tcacaaacaa  
 60  
 ctggacgcga tgcgcatgct gcacttcttc gccctcgacg aagaaaaccc cgccagcatc  
 120  
 tataactgcc tgcgcgccgc ggggggcaat gccacgcgg tacgcgggcg gatcaccgcc  
 180  
 gacatgtggg aaaacctcaa cgccacctgg ctggaaatgc gcagcatcgc cgccgggggc  
 240  
 ctggcccggc atggcatcag ccacttctgt gactgggtca agcagcggtc gcacctgttc  
 300  
 cgccggggcaa cctcgggcac catcatgcgc aacgacgctt accggtttat tcgcctgggc  
 360  
 acgtttgtcg agcgcgcgga caacacctg cgctgctgg atgcgcgcta cgaaatgttt  
 420  
 ggtgaggagt cggaagaggt cagcgacctg tcggcacgcg ggtattacca gtggagcgcc  
 480  
 ctgctgcggg ccttgctcgtc attcgaggcg tataccgaac tgtaccccaa cgcgt  
 535

<210> 2376  
 <211> 178  
 <212> PRT  
 <213> Homo sapiens

<400> 2376  
 Xaa Ala Met Ser Leu Leu Ser Ser Gly Thr Leu Asp Ser Tyr Leu Glu  
 1 5 10 15  
 Arg His Lys Gln Leu Asp Ala Met Arg Met Leu His Phe Phe Ala Leu  
 20 25 30  
 Asp Glu Glu Asn Pro Ala Ser Ile Tyr Asn Cys Leu Arg Ala Ala Arg  
 35 40 45  
 Gly Asn Ala His Ala Val Arg Gly Arg Ile Thr Ala Asp Met Trp Glu  
 50 55 60  
 Asn Leu Asn Ala Thr Trp Leu Glu Met Arg Ser Ile Ala Ala Gly Gly  
 65 70 75 80  
 Leu Ala Arg His Gly Ile Ser His Phe Cys Asp Trp Val Lys Gln Arg

```

      85              90              95
Ser His Leu Phe Arg Gly Ala Thr Ser Gly Thr Ile Met Arg Asn Asp
      100              105              110
Ala Tyr Arg Phe Ile Arg Leu Gly Thr Phe Val Glu Arg Ala Asp Asn
      115              120              125
Thr Leu Arg Leu Leu Asp Ala Arg Tyr Glu Met Phe Gly Glu Glu Ser
      130              135              140
Glu Glu Val Ser Asp Leu Ser Ala Arg Gly Tyr Tyr Gln Trp Ser Ala
      145              150              155              160
Leu Leu Arg Ala Leu Ser Ser Phe Glu Ala Tyr Thr Glu Leu Tyr Pro
      165              170              175
Asn Ala

```

&lt;210&gt; 2377

&lt;211&gt; 622

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2377

```

acgcgtgaag ggttgaggct tcagaagtgg tagggaagaa cagaagctcc cttctgaggg
60
agcaccacagg agatgaaagg aaccaatcct ggggtggcct gcaccaggct tatcaacccc
120
tgacagacaa atggaaaact tctgtgatgg tgggacatga aaaaatattt cacccttctg
180
ataaaatgga accagcagat agaagtagga atttttctgt taggtgaaat gtttttaaaa
240
atatgtatac aggaaaaagc ataaaacagt attgactggc aaacatagaa ctggaatgta
300
aatataatgt tctttgccct gaatgattta agtggcatga taaaactcat gccacagact
360
gggtaagaca aggaatctaa tccactctaa aaagaagaaa agcatagtaa aattctcctt
420
agagttagaa ttattaatag ttcctatcta ctatttaatt taatcatagt taatgatgag
480
aatttcttaa atttaaagct tctgatgatg ctaaagtgc atttctcatg attccttaaa
540
acaatttttg taaattctat tcctaggacc ttctgctttc agaaaaatta atgtcttgta
600
ttcttcgtat tggaggagat ct
622

```

&lt;210&gt; 2378

&lt;211&gt; 109

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2378

```

Met Ser Phe Ile Met Pro Leu Lys Ser Phe Arg Ala Lys Asn Ile Ile
  1           5           10           15
Phe Thr Phe Gln Phe Tyr Val Cys Gln Ser Ile Leu Phe Tyr Ala Phe
      20           25           30
Ser Cys Ile His Ile Phe Lys Asn Ile Ser Pro Asn Arg Lys Ile Pro

```

```

          35          40          45
Thr Ser Ile Cys Trp Phe His Phe Ile Arg Arg Val Lys Tyr Phe Phe
    50          55          60
Met Ser His His His Arg Ser Phe Pro Phe Val Cys Gln Gly Leu Ile
65          70          75          80
Ser Leu Val Gln Asp His Pro Gly Leu Val Pro Phe Ile Ser Trp Val
          85          90          95
Leu Pro Gln Lys Gly Ala Ser Val Leu Pro Tyr His Phe
    100          105

```

<210> 2379  
 <211> 342  
 <212> DNA  
 <213> Homo sapiens

```

<400> 2379
tcattgacctg gagacttcgg aaactcaaca agactgcagg gcacccaggg gcaccagccc
60
cggtcaccgc agaggatcag tgcactttgc catctggcag atcaactcat ggcacaactg
120
ggaaacataa cattcacgct tgtgaaccga gacgccatac cccagcgggtg ccgagagcaa
180
cagtgcgttg caggtctggg cagatgaggg cctccaggac acgaggactc actcgctcac
240
cctgcccact gggcagctgc tcgccactcc cctcctggag ggcaggacgg acaccacaca
300
cacacacaag caggggaagct gtgcagcagt ggggagaaaag ca
342

```

<210> 2380  
 <211> 113  
 <212> PRT  
 <213> Homo sapiens

```

<400> 2380
Met Thr Trp Arg Leu Arg Lys Leu Asn Lys Thr Ala Gly His Pro Gly
  1          5          10          15
Ala Pro Ala Pro Val Thr Ala Glu Asp Gln Cys Thr Leu Pro Ser Gly
    20          25          30
Arg Ser Thr His Gly Thr Thr Gly Lys His Asn Ile His Ala Cys Glu
    35          40          45
Pro Arg Arg His Thr Pro Ala Val Pro Arg Ala Thr Val Leu Cys Arg
    50          55          60
Ser Gly Gln Met Arg Ala Ser Arg Thr Arg Gly Leu Thr Arg Ser Pro
65          70          75          80
Cys Pro Leu Gly Ser Cys Ser Pro Leu Pro Ser Trp Arg Ala Gly Arg
          85          90          95
Thr Pro His Thr His Thr Ser Arg Glu Ala Val Gln Gln Trp Gly Glu
    100          105          110
Ser

```

<210> 2381  
 <211> 434

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2381

gtgcaccctg gccatatgga cgccagcgac gtcggcgctt tgcgtgacgt ggaaccgatc  
60  
ggcccaagta gagagatgga ttttgaatgg tgacgatgta cccgccgcag caagtggatg  
120  
ccgtcctctt tgacatggac ggaaccctgc tcaacaccct gccggcctgg tgcgtggcat  
180  
ctgagcatct gtggggcact tctctggctg acgctgacag cgccaagggtt gacgggggca  
240  
ccgtcgacga cgtcgttgag ctgtatctgc gagaccaccc tcaggcagat cccagggcca  
300  
ccatcgagcg tttcatggac atccttgacg ccaacctggc tggccacacc gagccgatgc  
360  
ccggagctga ccgcctcgtg aagaggctgt caggctcatgt acccatcgct gtggtgtcga  
420  
attccccgac gcgt  
434

&lt;210&gt; 2382

&lt;211&gt; 116

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2382

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Val | Thr | Met | Tyr | Pro | Pro | Gln | Gln | Val | Asp | Ala | Val | Leu | Phe | Asp |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Met | Asp | Gly | Thr | Leu | Leu | Asn | Thr | Leu | Pro | Ala | Trp | Cys | Val | Ala | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Glu | His | Leu | Trp | Gly | Thr | Ser | Leu | Ala | Asp | Ala | Asp | Ser | Ala | Lys | Val |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Asp | Gly | Gly | Thr | Val | Asp | Asp | Val | Val | Glu | Leu | Tyr | Leu | Arg | Asp | His |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Pro | Gln | Ala | Asp | Pro | Gln | Ala | Thr | Ile | Glu | Arg | Phe | Met | Asp | Ile | Leu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Asp | Ala | Asn | Leu | Ala | Gly | His | Thr | Glu | Pro | Met | Pro | Gly | Ala | Asp | Arg |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Leu | Val | Lys | Arg | Leu | Ser | Gly | His | Val | Pro | Ile | Ala | Val | Val | Ser | Asn |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     |     | 110 |     |
| Ser | Pro | Thr | Arg |     |     |     |     |     |     |     |     |     |     |     |     |
|     |     |     | 115 |     |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 2383

&lt;211&gt; 393

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2383

acgcgtgcgt tcagatgagc gccggacgaa actcctcggc cgcttcggca ggcattggatt  
60  
catgtcggca cgggcctttg aacaggatcg ccgtcgcgtg gctatccgcc gcgggtgggg  
120

cagaaaacgc ccactctccc ttccccaggc gccggccgtc gagtcgtcta cgcaacgcac  
 180  
 gtctacatag gtgacttttt cataccccca ctttcgtact cggatgggct cggcgtgctc  
 240  
 gatgtcggca cgaaaaatta aatgcactga atgcggggtg tcgcacagga tgcattctcg  
 300  
 ctttcttgat gccaccacc ttgttacata ttctgccatg caaaacacct tgtgattttt  
 360  
 ggccggagtgc aacatgggtat gtgtatgcc ctg  
 393

<210> 2384  
 <211> 125  
 <212> PRT  
 <213> Homo sapiens

<400> 2384  
 Met Leu His Ser Ala Lys Asn His Lys Val Phe Cys Met Ala Glu Tyr  
 1 5 10 15  
 Val Thr Arg Trp Val Ala Ser Arg Lys Thr Arg Cys Ile Leu Cys Asp  
 20 25 30  
 Asn Pro His Ser Val His Leu Ile Phe Arg Ala Asp Ile Glu His Ala  
 35 40 45  
 Glu Pro Ile Arg Val Arg Lys Trp Gly Tyr Glu Lys Val Thr Tyr Val  
 50 55 60  
 Asp Val Arg Cys Val Asp Asp Ser Thr Ala Gly Ala Trp Gly Arg Glu  
 65 70 75 80  
 Ser Gly Arg Phe Leu Pro His Pro Arg Arg Ile Ala Thr Arg Arg Arg  
 85 90 95  
 Ser Cys Ser Lys Ala Arg Ala Asp Met Asn Pro Cys Leu Pro Lys Arg  
 100 105 110  
 Pro Arg Ser Phe Val Arg Arg Ser Ser Glu Arg Thr Arg  
 115 120 125

<210> 2385  
 <211> 347  
 <212> DNA  
 <213> Homo sapiens

<400> 2385  
 acgcgttccc aaagtaggat ggctgggata gagggaaagg acatctttca ggcttggtat  
 60  
 gcactgtgct gtggactctt gttgtggggt cctaggtctg cccagcattt tggggttcac  
 120  
 cccgtgaccc tctacgggtt tccatgcccc cagcaccacg tccatcatca tttctggggt  
 180  
 cccctcacct cagagagcct gcttcctatg actgcgtggg ccagctggag aaggacgacc  
 240  
 caagaccct caagtttctg tgtcctgacc ccaagcatag gcctgagtgc tcctggggcc  
 300  
 caagggcctt tacgcactac tctctggggc ccaactgtctg cactctt  
 347

<210> 2386

<211> 109  
 <212> PRT  
 <213> Homo sapiens

<400> 2386  
 Met Ala Gly Ile Glu Gly Lys Asp Ile Phe Gln Ala Cys Tyr Ala Leu  
 1 5 10 15  
 Cys Cys Gly Leu Leu Trp Gly Pro Arg Ser Ala Gln His Phe Gly  
 20 25 30  
 Val His Pro Val Thr Leu Tyr Gly Phe Pro Cys Pro Gln His His Val  
 35 40 45  
 His His His Phe Trp Gly Pro Leu Thr Ser Glu Ser Leu Leu Pro Met  
 50 55 60  
 Thr Ala Trp Ala Ser Trp Arg Arg Thr Thr Gln Asp Pro Ser Ser Phe  
 65 70 75 80  
 Cys Val Leu Thr Pro Ser Ile Gly Leu Ser Ala Pro Gly Ala Gln Gly  
 85 90 95  
 Pro Leu Arg Thr Thr Leu Trp Gly Pro Leu Ser Ala Leu  
 100 105

<210> 2387  
 <211> 715  
 <212> DNA  
 <213> Homo sapiens

<400> 2387  
 ncggccgcac ttcaccttac ggaggggaga taatgagatc aattagaggc gccgtcaccg  
 60  
 cgccggagac agctgccgcc gcatagtaat caccgcggg ctgggtgcgc gggggctccc  
 120  
 cgctacctgc gcgcctgtg ctcccaccac gcggcaccga cccgggcgcg ccccgggccc  
 180  
 ctgtccgcag cccacagcca caccgcgcac cctacacct ccttgcgct ctgtgggga  
 240  
 gctcaccccc tccactcgca cagtgcgctg cggcccgggg tgtgggaggt cccgggactt  
 300  
 ggggtgtgag tgcctgtgtg ggggtagggg cagggtgtcg cttgtgcgca tatgggcatg  
 360  
 agtgtacatg gcgtgtgcct ggagatgggc gagtgcaggc tggaatgtgc cggcgtggca  
 420  
 cgtgtgtggg cccaaataga tgcgtgtgtg atcacatgtt gtgttcgtgt ttgcacctcg  
 480  
 tgtgcctgtg tgtccgtatt tgagtgttta caggaatgtg ggtggtgagt acccgatatg  
 540  
 ggggtgatct gcaactgtgc gtgtgtgtgt gtaggcgcgt gtgtgtgcgt gtgtgtgtta  
 600  
 ngggatacgt gtagatgtgc attagtgtga ctgtgtgtgc tcatgtgcct gtgcacgtgt  
 660  
 gtttgagggt tgtgtgcatg ggtagcgtct gtgagagcca tgtgtatatc tgcag  
 715

<210> 2388  
 <211> 58  
 <212> PRT

<213> Homo sapiens

<400> 2388

```

Met Gly Met Ser Val His Gly Val Cys Leu Glu Met Gly Glu Cys Arg
 1           5           10           15
Leu Glu Cys Ala Gly Val Ala Arg Val Trp Ala Gln Ile Asp Ala Cys
      20           25           30
Val Ile Thr Cys Cys Val Arg Val Cys Thr Ser Cys Ala Cys Val Ser
      35           40           45
Val Phe Glu Cys Leu Gln Glu Cys Gly Trp
      50           55

```

<210> 2389

<211> 336

<212> DNA

<213> Homo sapiens

<400> 2389

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ntcaccctgc cgccggaagg ttgctcgtac cgcattggcca tcgtcaccat gaagaagtcg
60
tatccggggcc acgccaagcg cgtcatgttg ggtgtctggt cgtttttgcg acagttcatg
120
tataccaagt tcgttatcgt caccgacgac gatatacaacg cccgcgactg gaacgacgtg
180
atctggggcca tcaccacgcg catggacccc aagcgcgaca cggatgatgat cgataacacg
240
ccgatcgact acctcgactt cgctcgccg gtgtccggcc tgggttcgaa gatgggggctc
300
gateccacgc acaaattggcc cggccacacc acccgn
336

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<210> 2390

<211> 112

<212> PRT

<213> Homo sapiens

<400> 2390

```

Xaa Thr Leu Pro Pro Glu Gly Cys Ser Tyr Arg Met Ala Ile Val Thr
 1           5           10           15
Met Lys Lys Ser Tyr Pro Gly His Ala Lys Arg Val Met Leu Gly Val
      20           25           30
Trp Ser Phe Leu Arg Gln Phe Met Tyr Thr Lys Phe Val Ile Val Thr
      35           40           45
Asp Asp Asp Ile Asn Ala Arg Asp Trp Asn Asp Val Ile Trp Ala Ile
      50           55           60
Thr Thr Arg Met Asp Pro Lys Arg Asp Thr Val Met Ile Asp Asn Thr
      65           70           75           80
Pro Ile Asp Tyr Leu Asp Phe Ala Ser Pro Val Ser Gly Leu Gly Ser
      85           90           95
Lys Met Gly Leu Asp Pro Thr His Lys Trp Pro Gly His Thr Thr Arg
      100          105          110

```

<210> 2391

<211> 388





atgaaggcta tgccgcttgt tgttgcgcgc gaggggtgtat ctaagaagga agccctcgaa  
 300  
 ctgctctcgg ccaataaggt ggaaaagctg cccatcgctg atgcggataa taagtcacc  
 360  
 ggcttgatta cgtcaagga ctttgtcaag accgagcagt accccaacgc g  
 411

<210> 2394

<211> 137

<212> PRT

<213> Homo sapiens

<400> 2394

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Leu | Ser | Thr | Glu | Asp | Gln | Ala | Glu | Gln | Val | Glu | Ile | Val | Lys | Arg |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Ser | Glu | Ser | Gly | Met | Val | Thr | Asp | Pro | Ile | Thr | Ala | Arg | Pro | Asp | Met |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Thr | Ile | Gly | Glu | Val | Asp | Ala | Leu | Cys | Ala | Arg | Phe | Arg | Ile | Ser | Gly |
|     | 35  |     |     |     |     |     | 40  |     |     |     | 45  |     |     |     |     |
| Leu | Pro | Val | Val | Asp | Glu | Asp | Gly | Thr | Leu | Met | Gly | Ile | Cys | Thr | Thr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Arg | Asp | Met | Arg | Phe | Glu | Pro | Asp | Phe | Asp | Arg | Lys | Val | Ser | Glu | Val |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Met | Thr | Ala | Met | Pro | Leu | Val | Val | Ala | Arg | Glu | Gly | Val | Ser | Lys | Lys |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Glu | Ala | Leu | Glu | Leu | Leu | Ser | Ala | Asn | Lys | Val | Glu | Lys | Leu | Pro | Ile |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Val | Asp | Ala | Asp | Asn | Lys | Leu | Thr | Gly | Leu | Ile | Thr | Val | Lys | Asp | Phe |
|     | 115 |     |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Val | Lys | Thr | Glu | Gln | Tyr | Pro | Asn | Ala |     |     |     |     |     |     |     |
|     | 130 |     |     |     |     |     | 135 |     |     |     |     |     |     |     |     |

<210> 2395

<211> 362

<212> DNA

<213> Homo sapiens

<400> 2395

aagcttttcag aggagtttgc taaagtgtta aggatttgca tattttcaac tttagtcata  
 60  
 tctaagtgcc ccaataaaac agcgcggcgc attgggggct ggctttcatc aacaactaac  
 120  
 ttagcaatat taatctgacc ttttcctggt gattgggcat ttagtaataa tgcggggcca  
 180  
 atatcatcat actttccaaa ttttttgat tttttagaca tcaactgaag ttgtgaccat  
 240  
 ttactgtctt tgtcttgatg gcaatctaaa caaacatctc ttgtattaag ttgttcactt  
 300  
 acccaaggat taggcactct aaaggcatga tcgcgtcgat catcgactcc catgtaacgc  
 360  
 gt  
 362

<210> 2396

<211> 117  
 <212> PRT  
 <213> Homo sapiens

<400> 2396  
 Met Gly Val Asp Asp Arg Arg Asp His Ala Phe Arg Val Pro Asn Pro  
 1 5 10 15  
 Trp Val Ser Glu Gln Leu Asn Thr Arg Asp Val Cys Leu Asp Cys His  
 20 25 30  
 Gln Asp Lys Asp Ser Lys Trp Ser Gln Leu Gln Leu Met Ser Lys Lys  
 35 40 45  
 Ser Lys Ile Phe Gly Lys Tyr Asp Asp Ile Gly Pro Ala Leu Leu Leu  
 50 55 60  
 Asn Ala Gln Ser Pro Gly Lys Gly Gln Ile Asn Ile Ala Lys Leu Val  
 65 70 75 80  
 Val Asp Glu Ser Gln Pro Pro Met Arg Arg Ala Val Leu Leu Gly His  
 85 90 95  
 Leu Asp Met Thr Lys Val Glu Asn Met Gln Ile Leu Asn Thr Leu Ala  
 100 105 110  
 Asn Ser Ser Ser Glu Ser  
 115

<210> 2397  
 <211> 449  
 <212> DNA  
 <213> Homo sapiens

<400> 2397  
 nacagcacac tccgcctcct ccgacgatca tagctttcac gtcggacatg atcccccgcc  
 60  
 tagtgtacta ctggtccttc tccgtccctc cctacgggga ccacacttcc tacaccatgg  
 120  
 aagggtacat caacaacact ctctccatct tcaaagtcgc agacttcaaa aacaaaagca  
 180  
 agggaaaccc gtactctgac ctgggtaacc ataccacatg caggtatcgt gatttccgat  
 240  
 acccacctgg acacccccag gagtataaac acaacatcta ctattggcat gtgattgcag  
 300  
 ccaagctggc ttttatcatt gtcatggagc acgtcatcta ctctgtgaaa tttttcattt  
 360  
 catatgcaat tcccgatgta tcaaagcgca caaagagcaa gatccagaga gaaaaatacc  
 420  
 taacccaaaa gcttcttcat gagaatcac  
 449

<210> 2398  
 <211> 76  
 <212> PRT  
 <213> Homo sapiens

<400> 2398  
 Cys Thr Thr Gly Pro Ser Pro Ser Leu Pro Thr Gly Thr Thr Leu Pro  
 1 5 10 15  
 Thr Pro Trp Lys Gly Thr Ser Thr Thr Leu Ser Pro Ser Ser Lys Ser

1740

nntaccgagg taaaactcga tagcctcggt gtcaccgacc agatgcgctc tgggcgctgc  
 60  
 tggatgtttg ccgcgctcaa cgtattccgc caccgcgcgg ccaaggagct caacatcgat  
 120  
 gactttgagt tttcctttac ctacctgcag tacttcgaca aactagagcg cgccaacttc  
 180  
 gcgctcaacc aactgctgga tctcaccgaa gacggcaccg actgggatga ccgcgacgtg  
 240  
 gctacttccc tcgagctcac aggcgacgac ggcggctggt ggtcattttt caccaacctc  
 300  
 gtggacaagt acggcgcagt cccggccgag gtcatgcctg aggtgcactc gtccggccac  
 360  
 accgaccaga tgaatcgga tatcgccacc atcatccgcc gcgccgcgca ccgtgcggtg  
 420  
 gaaggcgagg gggatcgcg gggcatcgtc aagcaagccc gccccgatat ccaacgcgt  
 479

<210> 2402

<211> 159

<212> PRT

<213> Homo sapiens

<400> 2402

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Thr | Glu | Val | Lys | Leu | Asp | Ser | Leu | Gly | Val | Thr | Asp | Gln | Met | Arg |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ser | Gly | Arg | Cys | Trp | Met | Phe | Ala | Ala | Leu | Asn | Val | Phe | Arg | His | Arg |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ala | Ala | Lys | Glu | Leu | Asn | Ile | Asp | Asp | Phe | Glu | Phe | Ser | Phe | Thr | Tyr |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |
| Leu | Gln | Tyr | Phe | Asp | Lys | Leu | Glu | Arg | Ala | Asn | Phe | Ala | Leu | Asn | Gln |
|     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |
| Leu | Leu | Asp | Leu | Thr | Glu | Asp | Gly | Thr | Asp | Trp | Asp | Asp | Arg | Asp | Val |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Ala | Thr | Ser | Leu | Glu | Leu | Thr | Gly | Asp | Asp | Gly | Gly | Trp | Trp | Ser | Phe |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Phe | Thr | Asn | Leu | Val | Asp | Lys | Tyr | Gly | Ala | Val | Pro | Ala | Glu | Val | Met |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Pro | Glu | Val | His | Ser | Ser | Gly | His | Thr | Asp | Gln | Met | Asn | Arg | Asp | Ile |
|     | 115 |     |     |     |     | 120 |     |     |     |     |     | 125 |     |     |     |
| Ala | Thr | Ile | Ile | Arg | Arg | Ala | Ala | His | Arg | Ala | Val | Glu | Gly | Glu | Gly |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Asp | Arg | Gly | Gly | Ile | Val | Lys | Gln | Ala | Arg | Pro | Asp | Ile | Gln | Arg |     |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     |     |

<210> 2403

<211> 387

<212> DNA

<213> Homo sapiens

<400> 2403

ntcataaacg gcgataaccc gctggactcg tctgcggttc acccggaagc ctaccgcgtg  
 60  
 gtgcagcgta ttgccgccga gaccggccgt gatatccgtt cgctgatcgg tgacgccgcg  
 120

ttcctcaagc gcctggaccc gaagaagtac accgacgaaa ccttcgggtgt gccgaccatc  
 180  
 accgacatcc tgcaagagct ggaaaaacct ggccgcgacc cgcgtcccga gttcaagacc  
 240  
 gccgagttcc aggacgggtgt tgaagacctc aaggacctgc agccggggcat gatcctcgaa  
 300  
 ggcgtgggtca ccaacgtgac caactttggc gcctttgtgg atatcggcgt gcatcaggac  
 360  
 ggtttgggtgc acatctctgc acttttcg  
 387

<210> 2404

<211> 129

<212> PRT

<213> Homo sapiens

<400> 2404

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Met | Asn | Gly | Asp | Asn | Pro | Leu | Asp | Ser | Ser | Ala | Val | His | Pro | Glu |
| 1   |     | 5   |     |     |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Ala | Tyr | Pro | Leu | Val | Gln | Arg | Ile | Ala | Ala | Glu | Thr | Gly | Arg | Asp | Ile |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     | 30  |     |     |     |
| Arg | Ser | Leu | Ile | Gly | Asp | Ala | Ala | Phe | Leu | Lys | Arg | Leu | Asp | Pro | Lys |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Lys | Tyr | Thr | Asp | Glu | Thr | Phe | Gly | Val | Pro | Thr | Ile | Thr | Asp | Ile | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Gln | Glu | Leu | Glu | Lys | Pro | Gly | Arg | Asp | Pro | Arg | Pro | Glu | Phe | Lys | Thr |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |
| Ala | Glu | Phe | Gln | Asp | Gly | Val | Glu | Asp | Leu | Lys | Asp | Leu | Gln | Pro | Gly |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Met | Ile | Leu | Glu | Gly | Val | Val | Thr | Asn | Val | Thr | Asn | Phe | Gly | Ala | Phe |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     | 110 |     |     |     |
| Val | Asp | Ile | Gly | Val | His | Gln | Asp | Gly | Leu | Val | His | Ile | Ser | Ala | Leu |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

Ser

<210> 2405

<211> 859

<212> DNA

<213> Homo sapiens

<400> 2405

ttgcaagtaa catcaaaagt catctacaga agcaaaagac aaaaaggccc ctccacctgc  
 60  
 aaattaaatg gaataatttg ctttatgaga agctcaccat tggggtcatt cttatttttt  
 120  
 ctcaactccac atttcactac aaaccaagga aagctccctc atggaccgac atctgggtgag  
 180  
 ccttcacctc tcccctggca atgcctggcc acctgacacc tggcctccct cctctttcca  
 240  
 gcaatcctgg taccaacgaa tggctcacca ccaccacccc caatgcccag accgcagacc  
 300  
 tgcattcctc ccatctcaca gcccacaaac caaacggtta ttcattctac ctcccatcct  
 360

actcctcacg aatttcttcc accgtagact ctgggtaatt ggactgactg aagcccaggg  
 420  
 gtcagtttct gtcctaagag cgctccaggt ggctgcaccc tgtgcccaga gccaggcccc  
 480  
 ctgctatagg ctcgctgcac tccccctgca ggtgctgggg acaccgcaac cctcctcctg  
 540  
 gggacaccta cttgcctttg caggccctcg ggggtcactt ctcccaggaa gccgcctctg  
 600  
 ggtgaggtaa tatecctcta tcacagcatt ggccacacca cattgcaaac gctgctgggg  
 660  
 tccactgtct tcaccaatta caccatgagc tccacagact ccaggaccat ggcttctacc  
 720  
 tctcagttcc cagtgttagc tatggggccc agcacacagg gaacagcagt tcaattaccc  
 780  
 agttcactga agggcagacc tgggatcata caggagcaa ggaagcttga gccccttcag  
 840  
 gagaagggga agaacgcgt  
 859

<210> 2406  
 <211> 149  
 <212> PRT  
 <213> Homo sapiens

<400> 2406  
 Met Asp Arg His Leu Val Ser Leu His Leu Ser Pro Gly Asn Ala Trp  
 1 5 10 15  
 Pro Pro Asp Thr Trp Pro Pro Ser Ser Phe Gln Gln Ser Trp Tyr Gln  
 20 25 30  
 Arg Met Ala His His His Pro Pro Gln Cys Pro Asp Arg Arg Pro Ala  
 35 40 45  
 Phe Leu Pro Ser His Ser Pro Lys Ser Lys Pro Leu Phe Ile Leu Pro  
 50 55 60  
 Pro Ile Leu Leu Leu Thr Asn Phe Phe His Arg Arg Leu Trp Leu Ile  
 65 70 75 80  
 Gly Leu Thr Glu Ala Gln Gly Ser Val Ser Val Leu Arg Ala Leu Gln  
 85 90 95  
 Val Ala Ala Pro Cys Ala Gln Ser Gln Ala Pro Cys Tyr Arg Leu Ala  
 100 105 110  
 Ala Leu Pro Leu Gln Val Leu Gly Thr Pro Gln Pro Ser Ser Trp Gly  
 115 120 125  
 His Leu Leu Ala Phe Ala Gly Pro Arg Gly Ser Leu Leu Pro Gly Ser  
 130 135 140  
 Arg Leu Trp Val Arg  
 145

<210> 2407  
 <211> 303  
 <212> DNA  
 <213> Homo sapiens

<400> 2407  
 nacgcgtggg ttatcttcag catggtgatc gcgattgggt tagccgttat ggctgcggtc  
 60

gtattcatcg agcaaggcca gcgacgtatc ccggtgcagt acgccaagcg gatgggtggg  
 120  
 cgccgaatgt ttggtggctc gacgacgtac attccgctca aggtaaacca atctggcggt  
 180  
 atccccgtca tctttgcctc gtcgacccg taccttccgg tgctctacgc aactttccgg  
 240  
 ccgcagacgt ccgcggcaaa gtggatcggg cactacttca cgcgcggtga ccatccgggtg  
 300  
 tac  
 303

<210> 2408  
 <211> 101  
 <212> PRT  
 <213> Homo sapiens

<400> 2408  
 Xaa Ala Trp Phe Ile Phe Ser Met Val Ile Ala Ile Gly Leu Ala Val  
 1 5 10 15  
 Met Ala Ala Val Val Phe Ile Glu Gln Gly Gln Arg Arg Ile Pro Val  
 20 25 30  
 Gln Tyr Ala Lys Arg Met Val Gly Arg Arg Met Phe Gly Gly Ser Thr  
 35 40 45  
 Thr Tyr Ile Pro Leu Lys Val Asn Gln Ser Gly Val Ile Pro Val Ile  
 50 55 60  
 Phe Ala Ser Ser Ile Leu Tyr Leu Pro Val Leu Tyr Ala Thr Phe Arg  
 65 70 75 80  
 Pro Gln Thr Ser Ala Ala Lys Trp Ile Gly His Tyr Phe Thr Arg Gly  
 85 90 95  
 Asp His Pro Val Tyr  
 100

<210> 2409  
 <211> 322  
 <212> DNA  
 <213> Homo sapiens

<400> 2409  
 ccatggtttc aagcccccat tgtgtcagcc cagagagcaa ctggagacc cctgacacca  
 60  
 cctccccgcc caacaggagg ggaagccgaa attcagattg tggaaactgc ctacaatttt  
 120  
 cttccggcca aatgaccctc cctaggttac caagaccctg gcctaagggg agccgaggtc  
 180  
 tcggcccgac tgcagacgcc cgcaccctga ctccagatgc ctccgaggca tccaggtggg  
 240  
 ccctgagggg cctgctgtgg ctttgttctt gttggctggg ctgggggtct gacctggtga  
 300  
 gggacatgag tgtcagtgtg gg  
 322

<210> 2410  
 <211> 106  
 <212> PRT

<213> Homo sapiens

<400> 2410

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Met Val Ser Ser Pro His Cys Val Ser Pro Glu Ser Asn Trp Arg Pro
 1           5           10           15
Ser Asp Thr Thr Ser Arg Pro Asn Arg Arg Gly Ser Arg Asn Ser Asp
      20           25           30
Cys Gly Asn Cys Leu Gln Phe Ser Ser Gly Gln Met Thr Leu Pro Arg
      35           40           45
Leu Pro Arg Pro Trp Pro Lys Gly Ser Arg Gly Leu Gly Pro Thr Ala
      50           55           60
Asp Ala Arg Thr Leu Thr Pro Asp Ala Ser Glu Ala Ser Arg Trp Ala
      65           70           75           80
Leu Arg Gly Leu Leu Trp Leu Cys Ser Cys Trp Leu Gly Trp Gly Ser
      85           90           95
Asp Leu Val Arg Asp Met Ser Val Ser Val
      100           105

```

<210> 2411

<211> 371

<212> DNA

<213> Homo sapiens

<400> 2411

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ccatgggctg ggtgctggag acacgagatc aggcaggccc tgcccctggg gtcatttcta
60
gggtctgcgg cagacagggg gacagagggg gctgtgagag ccctgaggct gaggggcttt
120
ctggggaagc accatcccta gggacctccg cgttcgggtca gtggccgctg ctgtcgggtg
180
gcagagcaga ggctggggcg agagtgggtca gcaggcctgc tgggtggcagc ttgtgcagga
240
agggaggatg gaggttggct tgtggctggc aagaggggtgg catgcacgtc gctgaaaggc
300
aggcctgggc ccgaggcctg ggtgtgggga cgctgagga gactgtacag tgtggagtcg
360
ggggggctgc g
371

```

<210> 2412

<211> 123

<212> PRT

<213> Homo sapiens

<400> 2412

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Met Gly Trp Val Leu Glu Thr Arg Asp Gln Ala Gly Pro Ala Pro Gly
 1           5           10           15
Ala His Ser Arg Val Cys Gly Arg Gln Gly Asp Arg Gly Ser Cys Glu
      20           25           30
Ser Pro Glu Ala Glu Trp Leu Ser Gly Glu Ala Pro Ser Leu Gly Thr
      35           40           45
Ser Ala Phe Gly Gln Trp Pro Leu Leu Ser Val Cys Arg Ala Glu Ala
      50           55           60
Gly Ala Arg Val Val Ser Arg Pro Ala Gly Gly Ser Leu Cys Arg Lys

```



```
<210> 2413
<211> 784
<212> DNA
<213> Homo sapiens
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<210> 2414
<211> 137
<212> PRT
<213> Homo sapiens
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1746

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<210> 2415
<211> 2164
<212> DNA
<213> Homo sapiens
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<400> 2415
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120
ccccccaccc gcgtcgccgc catggagggtg ctgcggcgct cttcgggtctt cgctgcgggag
180
atcatggacg cctttgatcg ctggcccaca gacaaggagc tgggtggccca ggctaaagca
240
ctaggccggg agtacgtgca cgcgcgggctt ttgcgcgccg gcctctcctg gagcgctcca
300
gagcgtgcct cgctgcccc tggaggacgc ctggctgagg tgtgcgcggt gctgctgcgc
360
ctgggcgatg agctggagat gatccggccc agcgtctacc gcaacgtggc gcgtcagctg
420
cacatctccc tgcagtctga gcctgtggtg accgatgcgt tcctggccgt ggctggccac
480
atcttctctg caggcatcac gtggggcaag gtggtgtccc tgtatgcggt ggccgcgggg
540
ctggccgtgg actgtgtgag gcaggcccag cctgccatgg tccacgccct cgtggactgc
600
ctgggggagt tcgtgcgcaa gaccctggca acctggctgc ggagacgcgg cggatggact
660
gatgtcctca agtgtgtggt cagcacagac cctggcctcc gctcccactg gctggtggct
720
gcactctgca gcttcggccg ctctctgaag gctgccttct tcgtgctgct gccagagaga
780
tgagctgccc acctggcagt ggccgcagcc tggccctctg ggcccaacgc aggaggccct
840
cagcaccgca acacatcttc ctctcccca ccgcagcctg gagcactcta acctcggaga
900
ccccctaagc ccggttcttc cgcagacca ggccctccgg aagggtgagt ggggaggggc
960
tttccctgagc ctggagctgg gctttggggc agcctgcgac cctccccgct tgtgtccctt
1020

```

ctctgtgat ctctgtgttt tcccttttct ttctggggcc aggaagtcag ggtcaactcc  
 1080  
 caggcctcag gtgaaggggc ccagaacacc tgctctcacc tgagccccag gtgaaggggc  
 1140  
 ccgggaacac ctgctctcac ctgagcccca ggtgaagggg cccgggaaca cctgctctca  
 1200  
 cctgagcccc tgggaaggg gcccgggaaca cctgctctca cctgagcccc aggtgaaggg  
 1260  
 gcccgggaaca cctgctctca cctgagcccc aggtgaaggg gcccgggaaca cctgctctca  
 1320  
 cctgagcccc aggtgaaggg gcccgggaac acctctcacc tgaacccggg ggtccccatc  
 1380  
 caggaagaag ggccatctca ggacatgagt cctcaggggc cctgcacatt caatctgaag  
 1440  
 gtgaccctgg cctggctgaa gctggaagag ctgtggggac tcagcctgta aacagagcgt  
 1500  
 aagggtcaca tgctggttgc ttaatccgtt tctggaggaa gagtatgaca cccacttgtg  
 1560  
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 1620  
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 1680  
 cagtggaggg tgagggtgac cccatctgct atttttgtgc tcatcctcat acaaccattt  
 1740  
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 1800  
 gtgccccac acacagcctt cccttgacgc ctacatttct aggcacatgt gaggcattt  
 1860  
 tcctggagcc ccgagccagc cctgtccctc cccagtgcag catggcactc aggagataca  
 1920  
 ggctggacat ggggcagtcg ttctggggag gcctggccta gcagccacc acctgagccc  
 1980  
 tcccggccag gcttcgtgct ggggtgggccc atgtgccagg acaggagggt cccggcgga  
 2040  
 agccagcccc ggactcatcg tgacattgag atccactgg agggtagggg tggtataaaa  
 2100  
 cttctccaaa cgataaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa  
 2160  
 aaaa  
 2164

&lt;210&gt; 2416

&lt;211&gt; 213

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2416

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Glu | Val | Leu | Arg | Arg | Ser | Ser | Val | Phe | Ala | Ala | Glu | Ile | Met | Asp |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ala | Phe | Asp | Arg | Trp | Pro | Thr | Asp | Lys | Glu | Leu | Val | Ala | Gln | Ala | Lys |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |     |
| Ala | Leu | Gly | Arg | Glu | Tyr | Val | His | Ala | Arg | Leu | Leu | Arg | Ala | Gly | Leu |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Ser | Trp | Ser | Ala | Pro | Glu | Arg | Ala | Ser | Pro | Ala | Pro | Gly | Gly | Arg | Leu |

|   |     |     |
|---|-----|-----|
| 50  | 55  | 60  |
| Ala Glu Val Cys Ala Val Leu Leu Arg Leu Gly Asp Glu Leu Glu Met |     |     |
| 65  | 70  | 75  |
| Ile Arg Pro Ser Val Tyr Arg Asn Val Ala Arg Gln Leu His Ile Ser |     |     |
|   | 85  | 90  |
| Leu Gln Ser Glu Pro Val Val Thr Asp Ala Phe Leu Ala Val Ala Gly |     |     |
|   | 100 | 105 |
| His Ile Phe Ser Ala Gly Ile Thr Trp Gly Lys Val Val Ser Leu Tyr |     |     |
|   | 115 | 120 |
| Ala Val Ala Ala Gly Leu Ala Val Asp Cys Val Arg Gln Ala Gln Pro |     |     |
|   | 130 | 135 |
| Ala Met Val His Ala Leu Val Asp Cys Leu Gly Glu Phe Val Arg Lys |     |     |
|   | 145 | 150 |
| Thr Leu Ala Thr Trp Leu Arg Arg Arg Gly Gly Trp Thr Asp Val Leu |     |     |
|   | 165 | 170 |
| Lys Cys Val Val Ser Thr Asp Pro Gly Leu Arg Ser His Trp Leu Val |     |     |
|   | 180 | 185 |
| Ala Ala Leu Cys Ser Phe Gly Arg Phe Leu Lys Ala Ala Phe Phe Val |     |     |
|   | 195 | 200 |
| Leu Leu Pro Glu Arg   |     | 205 |
| 210   |     |     |

&lt;210&gt; 2417

&lt;211&gt; 615

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2417

```

nnagatcttt ggaatgggca gaactactaa atacagttaa tgcaccaaca agggtaagta
60
aagctgattt gattttcata ttgatacttc aatagttaag tgaaggacta gttattgctc
120
cagttgtagt ttttcacact ttaaaaaagg ctttcaatta taaaatcttt ctccattatt
180
acgttttttc acaactgtga tccacgccac agttgcaaat aatcaacata gaaaaattaa
240
ataacataat tgatgaaaag ttagtttttc aaaaaatac gaaaaatttc atcacctaga
300
gaggaaaatg ttatgacaac ctatttcgat aaaattgaaa aaatctcctt tgaggagaaa
360
aaatccacaa atccttttgc tttcaaacat tatgatgcta atcaagtaat tttaggtaaa
420
actatggctg aacatttacg cttaacgggtg tgttattggc ataccttttg ctggaatggg
480
aatgatatgt ttgggctagg ttctttggaa cgaagttggc agaaaaattc aaatttgctt
540
gctggcgagc aacaaaaagc cgatattgct tttgagtttt tgaataagtt aggcgtgcct
600
tattattggt ttcatt
615

```

&lt;210&gt; 2418

&lt;211&gt; 101

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2418

```

Met Thr Thr Tyr Phe Asp Lys Ile Glu Lys Ile Ser Phe Glu Gly Glu
 1             5             10             15
Lys Ser Thr Asn Pro Phe Ala Phe Lys His Tyr Asp Ala Asn Gln Val
             20             25             30
Ile Leu Gly Lys Thr Met Ala Glu His Leu Arg Leu Thr Val Cys Tyr
             35             40             45
Trp His Thr Phe Cys Trp Asn Gly Asn Asp Met Phe Gly Leu Gly Ser
             50             55             60
Leu Glu Arg Ser Trp Gln Lys Asn Ser Asn Leu Leu Ala Gly Ala Glu
65             70             75             80
Gln Lys Ala Asp Ile Ala Phe Glu Phe Leu Asn Lys Leu Gly Val Pro
             85             90             95
Tyr Tyr Cys Phe His
             100

```

&lt;210&gt; 2419

&lt;211&gt; 318

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2419

```

aaattttcag aagtcctggt gttgcgcggt caaacagggg ccgaggaggg acgaccgcct
60
ccccgtgacg ctgcttcttc ttcctgcctg cagctgaggg gtctgttttg tgctgcttcc
120
gctccttctc cacgtacaca gggggcagct tagcctctgg gatgggagtg gcttcataca
180
tgagacacat gcccgagtcg aggtagatgt cgctgtcgtc ctgcggcggg gtgggtgggg
240
tccagaacgg catgacttct gtctgcccat cgacatcttc gtagacatac tccatgttgt
300
aggcatcccc tcacgcgt
318

```

&lt;210&gt; 2420

&lt;211&gt; 98

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2420

```

Met Glu Tyr Val Tyr Glu Asp Val Asp Gly Gln Thr Glu Val Met Pro
 1             5             10             15
Phe Trp Thr Pro Pro Thr Pro Pro Gln Asp Asp Ser Asp Ile Tyr Leu
             20             25             30
Asp Ser Gly Met Cys Leu Met Tyr Glu Ala Thr Pro Ile Pro Glu Ala
             35             40             45
Lys Leu Pro Pro Val Tyr Val Arg Lys Glu Arg Lys Arg His Lys Thr
             50             55             60
Asp Pro Ser Ala Ala Gly Arg Lys Lys Lys Gln Arg His Gly Glu Ala
65             70             75             80
Val Val Pro Pro Arg Ser Leu Phe Asp Arg Ala Thr Pro Gly Leu Leu

```

85 90 95

Lys Ile

<210> 2421  
 <211> 420  
 <212> DNA  
 <213> Homo sapiens

<400> 2421  
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 60  
 tactggttgt ttgacagtgc agggcttgtg cacagacgtg agccacaggg cagcacaacg  
 120  
 ctgtcgcaag tctgagtagg gattatcatg acggatacaa cttcagcccc gcggttacgcg  
 180  
 ctgcgtgggc tacagcttat tggctggcgt gacatgcaac acgcgctgga tttcctgttc  
 240  
 gccgacgggc agatgaaatc gggcacgctg gtggccatca acgcagaaaa gatgctggcg  
 300  
 gttgaagata atgcggaagt gaaaagcctg attgaagccg cggagtttaa ataccggcc  
 360  
 ggtattagcg tagtgcttc aattcgtaaa aagttcccc acgctggagt gtgctcgca  
 420

<210> 2422  
 <211> 91  
 <212> PRT  
 <213> Homo sapiens

<400> 2422  
 Met Thr Asp Thr Thr Ser Ala Pro Arg Tyr Ala Leu Arg Gly Leu Gln  
 1 5 10 15  
 Leu Ile Gly Trp Arg Asp Met Gln His Ala Leu Asp Phe Leu Phe Ala  
 20 25 30  
 Asp Gly Gln Met Lys Ser Gly Thr Leu Val Ala Ile Asn Ala Glu Lys  
 35 40 45  
 Met Leu Ala Val Glu Asp Asn Ala Glu Val Lys Ser Leu Ile Glu Ala  
 50 55 60  
 Ala Glu Phe Lys Tyr Pro Ala Gly Ile Ser Val Val Arg Ser Ile Arg  
 65 70 75 80  
 Lys Lys Phe Pro His Ala Gly Val Cys Ser Arg  
 85 90

<210> 2423  
 <211> 371  
 <212> DNA  
 <213> Homo sapiens

<400> 2423  
 tgatcaagtc ggaggattcg gcaggcgca gccatgaacg agaaggcgtc cgtctccaag  
 60  
 gagctcaacg ccaagcacia gaagatattg gaaggctctc tacggcatcc tgagaataga  
 120

gaatgcgcag actgcaagtc aaagggctcct cgatgggcaa gtgtgaatct aggtatcttt  
 180  
 atatgcatga catgttctgg cattcataga agcctggggg tgcacatata taaggtaaga  
 240  
 tctgccaccc tggatacatg gctgccagag caagttgcat ttattcaatc aatgggaaac  
 300  
 gaaaaagcaa atagctattg ggaagcagag ctgcctccta actacgatag ggttggaaata  
 360  
 gagaatttga t  
 371

<210> 2424  
 <211> 112  
 <212> PRT  
 <213> Homo sapiens

<400> 2424  
 Met Asn Glu Lys Ala Ser Val Ser Lys Glu Leu Asn Ala Lys His Lys  
 1 5 10 15  
 Lys Ile Leu Glu Gly Leu Leu Arg His Pro Glu Asn Arg Glu Cys Ala  
 20 25 30  
 Asp Cys Lys Ser Lys Gly Pro Arg Trp Ala Ser Val Asn Leu Gly Ile  
 35 40 45  
 Phe Ile Cys Met Thr Cys Ser Gly Ile His Arg Ser Leu Gly Val His  
 50 55 60  
 Ile Ser Lys Val Arg Ser Ala Thr Leu Asp Thr Trp Leu Pro Glu Gln  
 65 70 75 80  
 Val Ala Phe Ile Gln Ser Met Gly Asn Glu Lys Ala Asn Ser Tyr Trp  
 85 90 95  
 Glu Ala Glu Leu Pro Pro Asn Tyr Asp Arg Val Gly Ile Glu Asn Leu  
 100 105 110

<210> 2425  
 <211> 411  
 <212> DNA  
 <213> Homo sapiens

<400> 2425  
 accggtttgc aggcctggaa agacgggcat ttcgacctgg tgatcgtcga ctgcaacatg  
 60  
 cccgtcctga acggctacga gatgaccgcg cgctgcgcg aacatgaagc cnncgccatg  
 120  
 acctcccggc ctgcacgggg gtteggtttc accgcccacg cccagcccga ggaacgcccc  
 180  
 cgctgcaagg aagccggcat gaacgactgc ctgttcaagc ccatcagcct gaccaccctc  
 240  
 aaccagaaac tcgccgacgt cacgccgcgc ccgctgccga gccaggccgc cttcagcctc  
 300  
 gacggcctgc acgccctgac cgggggcgag ccgctgctga tgcgtcgctt gatcgacgag  
 360  
 ctgctgagca gttgccaggc ggcccgcgag gcaactgctcg gactgcccac c  
 411

<210> 2426

<211> 137  
 <212> PRT  
 <213> Homo sapiens

<400> 2426  
 Thr Gly Leu Gln Ala Trp Lys Asp Gly His Phe Asp Leu Val Ile Val  
 1 5 10 15  
 Asp Cys Asn Met Pro Val Leu Asn Gly Tyr Glu Met Thr Arg Arg Leu  
 20 25 30  
 Arg Glu His Glu Ala Xaa Ala Met Thr Ser Arg Pro Ala Arg Gly Phe  
 35 40 45  
 Gly Phe Thr Ala His Ala Gln Pro Glu Glu Arg Pro Arg Cys Lys Glu  
 50 55 60  
 Ala Gly Met Asn Asp Cys Leu Phe Lys Pro Ile Ser Leu Thr Thr Leu  
 65 70 75 80  
 Asn Gln Lys Leu Ala Asp Val Thr Pro Arg Pro Arg Pro Ser Gln Ala  
 85 90 95  
 Ala Phe Ser Leu Asp Gly Leu His Ala Leu Thr Gly Gly Glu Pro Leu  
 100 105 110  
 Leu Met Arg Arg Leu Ile Asp Glu Leu Leu Ser Ser Cys Gln Ala Ala  
 115 120 125  
 Arg Glu Ala Leu Leu Gly Leu Pro Ile  
 130 135

<210> 2427  
 <211> 293  
 <212> DNA  
 <213> Homo sapiens

<400> 2427  
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 60  
 tggagcgtaa aatgttgtag agcccagcta gaagccagga ggagcagaca ccctgctgat  
 120  
 ggagcccaac aagaaagatg ttgtgtccct cctggtgagc gctgtcccag tgcacccgat  
 180  
 aatggcgaag aaaatgtgcc tctttcagga aaagtatagg aaatgagaga agactgtgac  
 240  
 aactcatgac ctgcatacctt aatatccagt gacttcatct ccccttcacg cgt  
 293

<210> 2428  
 <211> 72  
 <212> PRT  
 <213> Homo sapiens

<400> 2428  
 His Asn Lys Gly Leu Gly Ile Leu Val Pro Cys Ala Ile Xaa Ala Ala  
 1 5 10 15  
 Phe Leu Leu Ile Trp Ser Val Lys Cys Cys Arg Ala Gln Leu Glu Ala  
 20 25 30  
 Arg Arg Ser Arg His Pro Ala Asp Gly Ala Gln Gln Glu Arg Cys Cys  
 35 40 45  
 Val Pro Pro Gly Glu Arg Cys Pro Ser Ala Pro Asp Asn Gly Glu Glu





&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2431

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nnacgcgtta acaattaaag cattaacgcc agatgaatgg caaaaacaaa aacattttat
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atagtcgggt aaatagggat tttcatgggt caatttatta ttcaaggtgg ctgccagtta
120
aatggcgagg taacaatttc tggggcaaaa aatgccgcat taccaatcct atttgctact
180
ttattatctg agggtgatat caatttaagc aatgtaccgc ttttaaaga tattgccacc
240
actatcgagt tgtaaaaga gctgggtgct actgctactc agactcaaca ctgcgtgcat
300
attaatgcga aagaagttaa gaactatact gcttcttatg aattagttag aagtatgcgt
360
gcttcaattt tggcattagg tccattgggt gctcgggttc gtgaagctt
409

```

&lt;210&gt; 2432

&lt;211&gt; 108

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2432

```

Met Gly Gln Phe Ile Ile Gln Gly Gly Cys Gln Leu Asn Gly Glu Val
1           5           10           15
Thr Ile Ser Gly Ala Lys Asn Ala Ala Leu Pro Ile Leu Phe Ala Thr
20           25           30
Leu Leu Ser Glu Gly Asp Ile Asn Leu Ser Asn Val Pro Leu Leu Lys
35           40           45
Asp Ile Ala Thr Thr Ile Glu Leu Leu Lys Glu Leu Gly Ala Thr Ala
50           55           60
Thr Gln Thr Gln His Cys Val His Ile Asn Ala Lys Glu Val Lys Asn
65           70           75           80
Tyr Thr Ala Ser Tyr Glu Leu Val Arg Ser Met Arg Ala Ser Ile Leu
85           90           95
Ala Leu Gly Pro Leu Val Ala Arg Phe Gly Glu Ala
100          105

```

&lt;210&gt; 2433

&lt;211&gt; 655

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2433

```

caattgccta caatattcag tacagtcaca tgctgcatag gtttgagtc tagaaacaac
60
aggctacacc acacagccga ggcgtgtgga ggactatacc atctgggttt acgtaagtgc
120
gctctatgat gctcacgtaa caatgaaatc acggaatctc tctctcagaa catttccccg
180
ttgtgaagca gcacgtgact ataatctttt cccaggttta cccctgaagt tcaagtgcaa
240

```

tgccccctgca cagcacagag cagggggacga taggaggcgt gccttctcca gctgaaccac  
 300  
 cgggccagcc gggcgggcag tgggggttg ggggaggggtt gacccattgg tgctgccacg  
 360  
 accaaagaga caggatcttg gagagagtga ggcctctgtg cagggggacga tgaaggccca  
 420  
 atctggggac atcagggaaa gcagcaaggg tctggctgat tgtgcaaaaa gaactttttc  
 480  
 tgtgactgcc gtgttccaaa cacacccttt gcttttacia aaacccaaac tgggaggttt  
 540  
 agcaaaaggc acagtcttcag agcataataa agacagagca gaatgggaga ggaggttaat  
 600  
 caaatggggc atcactcaat gcagggaggg gaggggtgtg ctcaggacaa cgcgt  
 655

<210> 2434  
 <211> 137  
 <212> PRT  
 <213> Homo sapiens

<400> 2434  
 Met Ala His Leu Ile Asn Leu Leu Ser His Ser Ala Leu Ser Leu Leu  
 1 5 10 15  
 Cys Ser Glu Thr Val Pro Phe Ala Lys Pro Pro Ser Leu Gly Phe Cys  
 20 25 30  
 Lys Ser Lys Gly Cys Val Trp Asn Thr Ala Val Thr Glu Lys Val Leu  
 35 40 45  
 Phe Ala Gln Ser Ala Arg Pro Leu Leu Leu Ser Leu Met Ser Pro Asp  
 50 55 60  
 Trp Ala Phe Ile Val Pro Cys Thr Glu Ala Ser Leu Ser Pro Arg Ser  
 65 70 75 80  
 Cys Leu Phe Gly Arg Gly Ser Thr Asn Gly Ser Thr Leu Pro Pro Thr  
 85 90 95  
 Pro Thr Ala Arg Pro Ala Gly Pro Val Val Gln Leu Glu Lys Ala Arg  
 100 105 110  
 Leu Leu Ser Ser Pro Ala Leu Cys Cys Ala Gly Ala Leu His Leu Asn  
 115 120 125  
 Phe Arg Gly Lys Pro Gly Lys Arg Leu  
 130 135

<210> 2435  
 <211> 401  
 <212> DNA  
 <213> Homo sapiens

<400> 2435  
 aagctttcct tcaccgggtc taccccagtg ggccggaccc ttttgaagng cgcggccgat  
 60  
 aacgtgctgc gtacctccat ggaactgggc ngcaatgcc cattcattgt ctttgaggac  
 120  
 gcagatattg accaagcggc ccaggggtgcg atgggcgcca agatgcgcaa tatcggcgag  
 180  
 gcctgcaccg cagctaaccg cttcttggtc cacgagtctg ttgctgagga gttctctgag  
 240

aaactcgttg cggagtttga gaagctcaat ctgggcaatg gtatggacga aggtattacc  
 300  
 tgcggacctc tcgtcgagtc caaggctttg gagagcattg cggcattggt ggacgatgct  
 360  
 gcagaaaagg gcgctaccat ctccaccggc ggtaagcgcg c  
 401

<210> 2436  
 <211> 133  
 <212> PRT  
 <213> Homo sapiens

<400> 2436  
 Lys Leu Ser Phe Thr Gly Ser Thr Pro Val Gly Arg Thr Leu Leu Lys  
 1 5 10 15  
 Xaa Ala Ala Asp Asn Val Leu Arg Thr Ser Met Glu Leu Gly Xaa Asn  
 20 25 30  
 Ala Pro Phe Ile Val Phe Glu Asp Ala Asp Ile Asp Gln Ala Val Gln  
 35 40 45  
 Gly Ala Met Gly Ala Lys Met Arg Asn Ile Gly Glu Ala Cys Thr Ala  
 50 55 60  
 Ala Asn Arg Phe Leu Val His Glu Ser Val Ala Glu Glu Phe Ser Glu  
 65 70 75 80  
 Lys Leu Val Ala Glu Phe Glu Lys Leu Asn Leu Gly Asn Gly Met Asp  
 85 90 95  
 Glu Gly Ile Thr Cys Gly Pro Leu Val Glu Ser Lys Ala Leu Glu Ser  
 100 105 110  
 Ile Ala Ala Leu Val Asp Asp Ala Ala Glu Lys Gly Ala Thr Ile Ser  
 115 120 125  
 Thr Gly Gly Lys Arg  
 130

<210> 2437  
 <211> 449  
 <212> DNA  
 <213> Homo sapiens

<400> 2437  
 aagcttagta ccaaaaagaa aacaaaaaca aaaacaaaac aaaccccccc cccacagag  
 60  
 taaaataacg gaaaaagatc tactatgcta gcaactaaca aataatacgt agttatgaaa  
 120  
 atggtatgta tttttcaagc tagacgttca taatggtaga acatgaggag gaaaactgcc  
 180  
 tcttaaattcc caccacttac tgtgacacag tgaccgggtcc ctgcagcgga ctggatagtt  
 240  
 gtatcagagt cctggacgga aacagatggc actcaaaagg tggcgcgag ttcagagaaa  
 300  
 tgcctatgta cggatttggc ccaatgcctc agcctgacct caggacctt cgggggtctg  
 360  
 ctccgcgccc acccttacac atctgtgacc ccacacactt ccaccccagc gccacattta  
 420  
 agttccagtc atttcatttt atcgtgtg  
 449

```

<400> 2439
ccctcagcat cggaccagag tacttggtat ctggatgaat cgacactcac tgacaacatc
60
aaaaagacac tgcacaagtt ctgtggcccc tcccctgtgg tcttcagtga tgtgaactcc
120
atgtatctgt cttccacgga gccgccagcc gctgctgaat gggcatgtct gctgcgccct
180
ctgagggggc gtgagccaga gggcgtctgg aacctgctaa gcattgtgcg ggagatgttc
240
aagcggaggg acagcaatgc tgcccccttg ttggaaatcc tactgacca gtgcctcacc
300
tatgaacaga taacaggttg gtggtatagc gtacgtacct cagcctcaca cagcagtgcc
360
agtgggcaca cgggccgtag caacgggcag tcagagggtg cagcccatgc ctgtgccage
420
atgtgtgacg agatggtcac actgtggagg ctggccgtgc tggaccctgc actcagcccc
480
cagcggcgcc gggaaactgtg tacgcagctg cggcagtggc aactgaaggt gattgagaac
540
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| Thr | Asp | Asn | Ile | Lys | Lys | Thr | Leu | His | Lys | Phe | Cys | Gly | Pro | Ser | Pro |
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| Val | Val | Phe | Ser | Asp | Val | Asn | Ser | Met | Tyr | Leu | Ser | Ser | Thr | Glu | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Pro | Ala | Ala | Ala | Glu | Trp | Ala | Cys | Leu | Leu | Arg | Pro | Leu | Arg | Gly | Arg |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Glu | Pro | Glu | Gly | Val | Trp | Asn | Leu | Leu | Ser | Ile | Val | Arg | Glu | Met | Phe |
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| Lys | Arg | Arg | Asp | Ser | Asn | Ala | Ala | Pro | Leu | Leu | Glu | Ile | Leu | Thr | Asp |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Gln | Cys | Leu | Thr | Tyr | Glu | Gln | Ile | Thr | Gly | Trp | Trp | Tyr | Ser | Val | Arg |
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|     |     | 115 |     |     |     | 120 |     |     |     |     |     | 125 |     |     |     |
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| 145 |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |     |
| Gln | Arg | Arg | Arg | Glu | Leu | Cys | Thr | Gln | Leu | Arg | Gln | Trp | Gln | Leu | Lys |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Val | Ile | Glu | Asn | Val | Lys | Arg | Gly | Gln | His | Lys | Lys | Thr | Leu | Glu | Arg |
|     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |     |
| Leu | Phe | Pro | Gly | Phe | Arg | Pro | Ala | Val | Glu | Ala | Cys | Tyr | Phe | Asn | Trp |
|     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |     |
| Glu | Glu | Ala | Tyr | Pro | Leu | Pro | Gly | Val | Thr | Tyr | Ser | Gly | Thr | Asp | Arg |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Lys | Leu | Ala | Leu | Cys | Trp | Ala | Arg | Ala | Leu | Pro | Ser | Arg | Pro | Gly | Ala |
| 225 |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |     |
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|     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |     |
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|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| 260 |     |     |     |     |     |     |     |     |     | 265 |     |     |     |     | 270 |  |  |  |  |
| Gly | Leu | Gly | Glu | Gly | Val | Pro | Ser | Ser | Gln | Arg | Gly | Pro | Arg | Arg | Leu |  |  |  |  |
| 275 |     |     |     |     |     |     |     |     |     | 280 |     |     |     |     | 285 |  |  |  |  |
| Ser | Ala | Glu | Gly | Gly | Asp | Lys | Ala | Leu | His | Lys | Met | Gly | Pro | Gly | Gly |  |  |  |  |
| 290 |     |     |     |     |     |     |     |     |     | 295 |     |     |     |     | 300 |  |  |  |  |
| Gly | Lys | Ala | Lys | Ala | Leu | Gly | Gly | Ala | Gly | Ser | Gly | Ser | Lys | Gly | Ser |  |  |  |  |
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| Ala | Gly | Gly | Gly | Ser | Lys | Arg | Arg | Leu | Ser | Ser | Glu | Asp | Ser | Ser | Leu |  |  |  |  |
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| Cys | Pro | Leu | His | Gly | Gly | Ser | Arg | Gly | Pro | Ser | Thr | Phe | Leu | Pro | Glu |  |  |  |  |
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| 380 |     |     |     |     |     |     |     |     |     | 385 |     |     |     |     | 390 |  |  |  |  |
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| Asp | Val | Cys | Thr | Gln | Asp | Asp | Leu | Pro | Ser | Thr | Asp | Glu | Ser | Gly | Asn |  |  |  |  |
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| Gly | Leu | Pro | Lys | Thr | Lys | Glu | Ala | Ala | Pro | Ala | Val | Gly | Glu | Glu | Asp |  |  |  |  |
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| Asp | Asp | Tyr | Gln | Ala | Tyr | Tyr | Leu | Asn | Ala | Gln | Asp | Gly | Ala | Gly | Gly |  |  |  |  |
| 440 |     |     |     |     |     |     |     |     |     | 445 |     |     |     |     | 450 |  |  |  |  |
| Glu | Glu | Glu | Lys | Ala | Glu | Gly | Gly | Ala | Gly | Glu | Glu | His | Asp | Leu | Phe |  |  |  |  |
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| Leu | Glu | Leu | Gln | Arg | Pro | Pro | Ala | Ser | Thr | Lys | Ala | Leu | Glu | Val | Lys |  |  |  |  |
| 560 |     |     |     |     |     |     |     |     |     | 565 |     |     |     |     | 570 |  |  |  |  |
| Leu | Ala | Tyr | Gln | Glu | Ser | Glu | Val | Ala | Ala | Leu | Leu | Lys | Lys | Ile | Pro |  |  |  |  |
| 575 |     |     |     |     |     |     |     |     |     | 580 |     |     |     |     | 585 |  |  |  |  |
| Leu | Gly | Pro | Ser | Glu | Met | Ser | Thr | Met | Arg | Cys | Arg | Ala | Glu | Glu | Leu |  |  |  |  |
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| Thr | Val | Ser | Glu | Ala | Glu | His | Pro | Leu | Leu | Cys | Glu |     |     |     |     |  |  |  |  |

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| Gln Thr His Lys Pro Gln Thr Leu Ser Ser Phe Tyr Ser Ser Ser Arg |      |     |      |      |
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| Pro Thr Thr Ala Ser Gln Arg Ser Pro Ser Lys His Gly Gly Pro Ser |      |     |      |      |
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| Thr Glu Lys Asn Val Pro Glu Ser Ser Pro His Ser Pro Cys Glu Gly |      |     |      |      |
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| Leu Pro Ser Glu Ala Ala Leu Thr Pro Arg Pro Glu Gly Lys Val Pro |      |     |      |      |
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| Pro His Arg Asn Leu His Leu Cys Ala Phe Glu Ile Gly Leu Tyr Ala |      |     |      |      |
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 ggaggacaca gaaggatgga gggaaaggca ccaactcacag aggcggcgct ggagaatttt  
 120  
 ccatttggtta ttttggtttt ggtgaacatg cactttgcgt catgcaaattc aggtttctaa  
 180  
 acattaacaa ccggagagaa atgacatttt ggggccgccc gtgactcttg cgtgcctctg  
 240  
 ctgccccctg gtggcagccc cgagtcactt ccagcagggc cccccaccc caagggccca  
 300  
 gcctcgggca ggaagggtac aaagcccccg ccgtggttct gccacgaggt ctcttgga  
 360  
 tgaggggaac agcacagcga cgtccttgcg tcctaaatgc atcccctggt ggccgttttt  
 420  
 cgccacacag gcttggcaaa atctctgcgt cactgagcag cattttaacc tcttgaatga  
 480  
 gatgcctccg accttttggga tcctctttct gcacctctca ggggacaggt cccgtctgta  
 540  
 cggcgctgcc tacgagaaac ccaagttcat tactgcagcc aaaggaaagg tgcaggcggt  
 600  
 gggaggctcc tgcaagggtga tgcgtctggc cataagtccc actgccttct cccacctgct  
 660  
 ggctctgccc cagcagttcc ggaagcagac ccaggcccag gtgtacagtg aggacatggc  
 720

cctgaacata ggctcggaa cagaaggcct gcaggtggaa gagaaggagc gccctgtgca  
780  
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840  
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900  
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960  
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1080  
gtggaatcgc ctccataaag aagagacaga aggtggcgtg aaaaaggagg gaagaagcag  
1140  
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1200  
ccccctgac tgcacatag tcgactcaga caacttcaag ttcgtcgtgg acccatacga  
1260  
ggaggccag gggccagaaa tgctaactcc tgtctccatc acccaagaca ttttgaaag  
1320  
attccaagac acattcacgt cgcgatgggc gggacatctg ggaagcaagc actttccag  
1380  
ccaggccag tgggagcagg ccctgggcag ctgcagcggc tttttcttct atggaatgga  
1440  
gagcttctctg tcccatatat tagtggagag attggtcgcc atgaacttgc aagagtgcc  
1500  
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1560  
cgtggagcac aggagatctg ttggccgttg ggaagccaat tggagaaacg gtgcgtctcc  
1620  
ttcagaagat gagtggcgac gaggcgtgga accaaggcga ggcttctcag accttgaagg  
1680  
acaagctgct gctgctccaa agctccgagc tccttccac cacgctcaac ttggtcctgt  
1740  
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1800  
tggggcccca gcaattgct ctgcccttg ctctgccct ctgccaaccc atccccacct  
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1920  
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1980  
ctcagctct gctgctctgt gtgcgccatg ggtctgcgt cggggtgga gctgcgtctc  
2040  
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2100  
ccagaagact attcagaccg tgagcctgtt ttgatttga gtgttccact aaacaaacaa  
2160  
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2220  
aaaaaaaaa aaaaaaaaaa aaaa  
2244

&lt;210&gt; 2442

<211> 168  
 <212> PRT  
 <213> Homo sapiens

<400> 2442

```

Met Gly Cys Arg Thr Lys Pro Ser Gly Ser Ala Gly Leu Asp Leu Pro
 1           5           10           15
Pro Ile Ser Cys Trp Gly Pro Ser Thr Cys Leu Cys Pro Trp Leu Cys
      20           25           30
Pro Ser Ala Asn Pro Ser Pro Pro Gly Ser His Pro Gln Leu Pro
      35           40           45
Ala Arg Ser Pro Leu Pro Gly Pro Leu Pro Ser Pro Trp Cys Ser Leu
      50           55           60
Ser Gln Gly Pro Ser Pro Ser Asp Phe Pro Gln Gly Ser Arg Leu Asp
65           70           75           80
Leu Glu Leu Cys Leu Pro Val Cys Ala Met Gly Ser Ala Ser Gly Leu
      85           90           95
Glu Leu Arg Leu Phe Pro Gly Pro Gly Gln Gly Arg Pro Pro Leu Gly
      100          105          110
Gly Ala Gly Ala Glu Leu Leu Arg Pro Glu Asp Tyr Ser Asp Arg Glu
      115          120          125
Pro Val Phe Asp Leu Ser Val Pro Leu Asn Lys Gln Gln Lys Pro Lys
      130          135          140
Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys
145          150          155          160
Lys Lys Lys Lys Lys Lys Lys
      165
  
```

<210> 2443  
 <211> 361  
 <212> DNA  
 <213> Homo sapiens

<400> 2443

```

nccgtgcgcg ctatcttgcg tcgtacgccg tccaggggaag atgaaaaaat gctacaaacg
60
gccgatggac gattgcgcat tgatatcgaa tccatgcgca cctttgtaga gggcaaagaa
120
gtccatttga cgaaaaacga atttttaatt gtgcagactt tgtttacgca ccccaataag
180
atctatacgc gcgatgaaat tatcgaagtc accttcggaa tggattatga ggcctttgac
240
cgtgccattg atacctatat caaaaacatt cgccagaaga ttgaagcgga tccgaaaaac
300
cccgtctata tccgcacggt ttatggtgtc gggatatctgc ccggaggctt tgatgaagct
360
t
361
  
```

<210> 2444  
 <211> 120  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 2444

Xaa Val Arg Ala Ile Leu Arg Arg Thr Pro Ser Arg Glu Asp Glu Lys  
 1 5 10 15  
 Met Leu Gln Thr Ala Asp Gly Arg Leu Arg Ile Asp Ile Glu Ser Met  
 20 25 30  
 Arg Thr Phe Val Glu Gly Lys Glu Val His Leu Thr Lys Asn Glu Phe  
 35 40 45  
 Leu Ile Val Gln Thr Leu Phe Thr His Pro Asn Lys Ile Tyr Thr Arg  
 50 55 60  
 Asp Glu Ile Ile Glu Val Thr Phe Gly Met Asp Tyr Glu Ala Phe Asp  
 65 70 75 80  
 Arg Ala Ile Asp Thr His Ile Lys Asn Ile Arg Gln Lys Ile Glu Ala  
 85 90 95  
 Asp Pro Lys Asn Pro Val Tyr Ile Arg Thr Val Tyr Gly Val Gly Tyr  
 100 105 110  
 Leu Pro Gly Gly Phe Asp Glu Ala  
 115 120

&lt;210&gt; 2445

&lt;211&gt; 403

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2445

agatctgttg aatgaagcag gtgccactta gacattcact tcactgactc caaccacaac  
 60  
 ctcccccttca tttgatatcc tgctcttggc agaaggatgg agaaagagca tcgcacaaaag  
 120  
 aggaagcatg tttatcctgt tcagattact gcttctgcca ggctgctgct gctgttgggt  
 180  
 tctgcacatt tgctctttat taagcaaatg tcagagctgg gtgctggcaa gggaatcccc  
 240  
 tgtatttaca caggtaaacc tgagagccag agggcccaa accatcctgg ctgcgaggga  
 300  
 caagctatta gagttaataa cagtgcactg gcattccttc aaaatcctaa tggaagcata  
 360  
 aataaaaaga ggaaagtccc ctttacccaa gaacctgaaa aan  
 403

&lt;210&gt; 2446

&lt;211&gt; 102

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2446

Met Glu Lys Glu His Arg Thr Lys Arg Lys His Val Tyr Pro Val Gln  
 1 5 10 15  
 Ile Thr Ala Ser Ala Arg Leu Leu Leu Leu Gly Ser Ala His Leu  
 20 25 30  
 Leu Phe Ile Lys Gln Met Ser Glu Leu Gly Ala Gly Lys Gly Ile Pro  
 35 40 45  
 Cys Ile Tyr Thr Gly Lys Pro Glu Ser Gln Arg Ala Pro Asn His Pro  
 50 55 60  
 Gly Cys Glu Gly Gln Ala Ile Arg Val Asn Asn Ser Ala Leu Ala Phe

65                                      70                                      75                                      80  
 Leu Gln Asn Pro Asn Gly Ser Ile Asn Lys Lys Arg Lys Val Pro Phe  
                                     85                                      90                                      95  
 Thr Gln Glu Pro Glu Lys  
                                     100

<210> 2447

<211> 744

<212> DNA

<213> Homo sapiens

<400> 2447

nacgcgtcga ggtttgccag tcacgggttg cgggtggggc aggtactact caccgtcaat  
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 gacctgggtgc ggcccacttc gtaccgcaat gcctgggtcaa ccctcgacac ttgctgggg  
 120  
 ttgggcgtcg tgccgatcgt caacgagaac gacacgggtcg ccaccggaga aattcggttt  
 180  
 ggcgataatg atcggttgc tgccctggta gccgagctgg tgcgcgctca agccctcatt  
 240  
 ctgctctctg acgttgacgc cttgtacacc gcccatccgg attcaccgga tgctcgtcgc  
 300  
 gtggaggttg tggaggacat cgatgcattg gatgtcgata ccataaagc tggttcgggg  
 360  
 gtgggaaccg gcggcatgac cacgaaactt gaagccgccc gaatggccac ctgtgccggg  
 420  
 gtaccgggtg tactcgagc ggcggtgat gcccggagc ttctggctgg tgccccgtg  
 480  
 ggtacctact tccgcccgt ggcgacgca cgccccgac ggttgctgtg gttggccgac  
 540  
 gctgccaccc cgcagggaca gatcgtcatc gacgacggag ctgtcgaagc ttgacacag  
 600  
 cgtcattcct cgttgttggc ggtgggtgtg actcgggtac acggggattt ccaagcaggc  
 660  
 gaccagtgta cgatcctggc ctccgacggt cgagttgttg gtcgcggtat cgcccagttc  
 720  
 tcccatgatg aggtgcgcgt catg  
 744

<210> 2448

<211> 248

<212> PRT

<213> Homo sapiens

<400> 2448

Xaa Ala Ser Arg Phe Ala Ser His Gly Leu Arg Val Gly Gln Val Leu  
 1                                      5                                      10                                      15  
 Leu Thr Val Asn Asp Leu Val Arg Pro Thr Ser Tyr Arg Asn Ala Trp  
                                     20                                      25                                      30  
 Ser Thr Leu Asp Thr Leu Leu Gly Leu Gly Val Val Pro Ile Val Asn  
                                     35                                      40                                      45  
 Glu Asn Asp Thr Val Ala Thr Gly Glu Ile Arg Phe Gly Asp Asn Asp  
                                     50                                      55                                      60  
 Arg Leu Ala Ala Leu Val Ala Glu Leu Val Arg Ala Gln Ala Leu Ile

```

65          70          75          80
Leu Leu Ser Asp Val Asp Ala Leu Tyr Thr Ala His Pro Asp Ser Pro
      85          90          95
Asp Ala Arg Arg Val Glu Val Val Glu Asp Ile Asp Ala Leu Asp Val
      100         105         110
Asp Thr His Lys Ala Gly Ser Gly Val Gly Thr Gly Gly Met Thr Thr
      115         120         125
Lys Leu Glu Ala Ala Arg Met Ala Thr Cys Ala Gly Val Pro Val Val
      130         135         140
Leu Ala Ala Ala Val Asp Ala Pro Asp Val Leu Ala Gly Ala Pro Val
145         150         155         160
Gly Thr Tyr Phe Arg Pro Leu Ala Thr Arg Arg Pro Arg Arg Leu Leu
      165         170         175
Trp Leu Ala Asp Ala Ala Thr Pro Gln Gly Gln Ile Val Ile Asp Asp
      180         185         190
Gly Ala Val Glu Ala Leu Thr Gln Arg His Ser Ser Leu Leu Ala Val
      195         200         205
Gly Val Thr Arg Val His Gly Asp Phe Gln Ala Gly Asp Pro Val Thr
      210         215         220
Ile Leu Ala Ser Asp Gly Arg Val Val Gly Arg Gly Ile Ala Gln Phe
225         230         235         240
Ser His Asp Glu Val Arg Val Met
      245

```

<210> 2449  
 <211> 296  
 <212> DNA  
 <213> Homo sapiens

```

<400> 2449
gtgcactttg ttacagccct ggaacatgaa cacatgccgt catcaactcc ccaaaatctc
60
ctactgtctct cccctcctcc ctgggccctg tcctatcccc agaggccaga caggccttcc
120
tcgcatgcaa gagtctccct cgccctgccg gacagtggcc tccatctacc tgcctgtctt
180
gctggactcc agaactcc agtcctttcc cccttggggg ttgggggggg ccccccttt
240
ttttcccccc ctttccctct tcattccaca ggaggccagc ctcaacatcc ccccc
296

```

<210> 2450  
 <211> 90  
 <212> PRT  
 <213> Homo sapiens

```

<400> 2450
Met Asn Thr Cys Arg His Gln Leu Pro Lys Ile Ser Tyr Cys Ser Pro
1          5          10          15
Leu Leu Pro Gly Pro Cys Pro Ile Pro Arg Gly Gln Thr Gly Leu Pro
      20          25          30
Arg Met Gln Glu Ser Pro Ser Pro Cys Arg Thr Val Ala Ser Ile Tyr
      35          40          45
Leu Pro Val Leu Leu Asp Ser Arg Thr Leu Gln Ser Phe Pro Pro Trp

```



```

      50              55              60
Gly Leu Gly Gly Ala Pro Pro Phe Phe Pro Pro Leu Ser Leu Phe Ile
65              70              75              80
Pro Gln Glu Ala Ser Leu Asn Ile Pro Xaa
      85              90

```

<210> 2451  
 <211> 589  
 <212> DNA  
 <213> Homo sapiens

```

<400> 2451
nacgcgtgac tggattgctc aacgggtgag gaatcgagcg gttacgatgt cgggccgatc
60
tgcaacgatg atcttgtagc cgatgtattg accggtgtgt gggccgatct tgtgggccag
120
gagaaggctg tcggggctct gcgtcgtgcc gccgaatcgc agccggggcg ctctcccat
180acgcattggt cattacgggt cgcctggat caggtcggtc gaatgctgcg      240
aaggcctttg cagcggcgct acagtgcgtc gaccatggat gcgggcagtg caatgcctgt
300
cgaaccngcc tgtcaggcgc ccacctgac gtcaccctcg tgcgtactga ggcgctgtct
360
attggcgctc attgaggtcg tgaaatgggt ttgttcgagc gggcgatgaa ttcgggtccc
420
cggggcgctc ccagggttgt cgtcgtcgaa gatgccgacc gcactactga acgcggagct
480
gacgccttgc ttaaagctat cgaggagcct gcgccgaaaa ccgtctggtt gctgtgtgcc
540
cctactccag aggacgtcat cgtcacgac aggtcgagat gtcggcgcc
589

```

<210> 2452  
 <211> 121  
 <212> PRT  
 <213> Homo sapiens

```

<400> 2452
Leu Asp Cys Ser Thr Gly Glu Glu Ser Ser Gly Tyr Asp Val Gly Pro
1              5              10              15
Ile Cys Asn Asp Asp Leu Val Ser Asp Val Leu Thr Gly Val Trp Ala
      20              25              30
Asp Leu Val Gly Gln Glu Lys Ala Val Gly Val Leu Arg Arg Ala Ala
      35              40              45
Glu Ser Gln Pro Gly Arg Ser Ser His Ala Met Ser His Ala Trp Leu
      50              55              60
Ile Thr Gly Pro Pro Gly Ser Gly Arg Ser Asn Ala Ala Lys Ala Phe
65              70              75              80
Ala Ala Ala Leu Gln Cys Val Asp His Gly Cys Gly Gln Cys Asn Ala
      85              90              95
Cys Arg Thr Xaa Leu Ser Gly Ala His Pro Asp Val Thr Leu Val Arg
      100              105              110
Thr Glu Ala Leu Ser Ile Gly Val Asp
      115              120

```

<210> 2453  
 <211> 695  
 <212> DNA  
 <213> Homo sapiens

<400> 2453  
 nnacgcgtca gccatctgtg agtgctcaca ctatacacac atccccgggc acactcaggg  
 60  
 agattcacac attcctacga gcacacatgt gcttgcacga gttattcccc atgtgaacac  
 120  
 acagggttggc acacgcacat gcccctgggt atgtcatgt ccattcatcc atcccagcct  
 180  
 gtgcacgtcc tctcactcct gtgttcacac ctatgcccaa atgaaccaag ggacacacat  
 240  
 gcacaccctt atgtggtgca cacacactcg tgcacacgga gccacaccag cacatgctca  
 300  
 gaggcatttg tgtgcgtggg catttgcagc atgactcaga acggagtatg ggggtggcgcg  
 360  
 gcgtggctgg ggaggtccca tcagcccgcc tctgaaaccc tcccaacctg cccatcctgg  
 420  
 cccaggcact gtgtctccgg cttgggcttc agccccggac cccaggacac cccggacaaa  
 480  
 gaggagctgc tctcgtctga agcctgctac gaatgcagga tcaatggcct ctcccctcgg  
 540  
 gaccggccac gacgcagtgc ccacagggac caccaggtga catgggtgct gcactaggca  
 600  
 ggggtggcca ggaatgggt gagggtggga aagaggctgt ggacccgact tagtcatgtc  
 660  
 agccccccga agaaggagca ccaggctcca gatct  
 695

<210> 2454  
 <211> 166  
 <212> PRT  
 <213> Homo sapiens

<400> 2454  
 Met Ser Tyr Ser Pro Cys Glu His Thr Gly Trp His Thr His Met Pro  
 1 5 10 15  
 Leu Gly Met Leu Met Ser Ile His Pro Ser Gln Pro Val His Val Leu  
 20 25 30  
 Ser Leu Leu Cys Ser His Leu Cys Pro Asn Glu Pro Arg Asp Thr His  
 35 40 45  
 Ala His Pro Tyr Val Val His Thr His Ser Cys Thr Arg Ser His Thr  
 50 55 60  
 Ser Thr Cys Ser Glu Ala Phe Val Cys Val Gly Ile Cys Ser Met Thr  
 65 70 75 80  
 Gln Asn Gly Val Trp Gly Gly Ala Ala Trp Leu Gly Arg Ser His Gln  
 85 90 95  
 Pro Ala Ser Glu Thr Leu Pro Thr Cys Pro Ser Trp Pro Arg His Cys  
 100 105 110  
 Val Ser Gly Leu Gly Phe Ser Pro Gly Pro Gln Asp Thr Pro Asp Lys  
 115 120 125  
 Glu Glu Leu Leu Ser Ser Glu Ala Cys Tyr Glu Cys Arg Ile Asn Gly

130                      135                      140  
 Leu Ser Pro Arg Asp Arg Pro Arg Arg Ser Ala His Arg Asp His Gln  
 145                      150                      155                      160  
 Val Thr Trp Val Leu His  
                          165

<210> 2455  
 <211> 378  
 <212> DNA  
 <213> Homo sapiens

<400> 2455  
 acgcgtcggc agaagcgtca gctgaccgtc ggagccgata tgtccccagg cgtcgtcagc  
 60  
 ggaaccgcgc agaaggaaat ccacgcgctg ccgatcatga aggcgctccc catgggcgtc  
 120  
 aaagaactcg ttctgggcga atcgaagtgg caggacgagt tgatcaacaa cttcatcgtc  
 180  
 gcgctgtttg caggcgtggt gttgctgttc gcggtgctgg tgctgctgta ccggcgcttg  
 240  
 ctgccgccgt tcatcaacgt gatgtcgctg gcggtggcac cgctgggcgg gttgatcggc  
 300  
 ctgtggctga ccaacacgcc gatctcgatg ccggtctata tcggcttgat catgctgctc  
 360  
 ggcatcgtcg ccaagaat  
 378

<210> 2456  
 <211> 126  
 <212> PRT  
 <213> Homo sapiens

<400> 2456  
 Thr Arg Arg Gln Lys Arg Gln Leu Thr Val Gly Ala Asp Leu Ser Pro  
 1                      5                      10                      15  
 Gly Val Val Ser Gly Thr Ala Gln Lys Glu Ile His Ala Leu Pro Ile  
                          20                      25                      30  
 Met Lys Ala Leu Pro Met Gly Val Lys Glu Leu Val Leu Gly Glu Ser  
                          35                      40                      45  
 Lys Trp Gln Asp Glu Leu Ile Asn Asn Phe Ile Val Ala Leu Phe Ala  
                          50                      55                      60  
 Gly Val Val Leu Leu Phe Ala Val Leu Val Leu Leu Tyr Arg Arg Leu  
 65                      70                      75                      80  
 Leu Pro Pro Phe Ile Asn Val Met Ser Leu Ala Val Ala Pro Leu Gly  
                          85                      90                      95  
 Gly Leu Ile Gly Leu Trp Leu Thr Asn Thr Pro Ile Ser Met Pro Val  
                          100                      105                      110  
 Tyr Ile Gly Leu Ile Met Leu Leu Gly Ile Val Ala Lys Asn  
                          115                      120                      125

<210> 2457  
 <211> 754  
 <212> DNA  
 <213> Homo sapiens

&lt;400&gt; 2457

cctaggaatt taccaccatc aaagacttac attaaccagc tatccatgaa ctcacctgag  
 60  
 atgagcgaat gtgacatctt gcacactctg cgatgggtctt ctcgggtccg gatcagctcc  
 120  
 tatgtcaact ggataaagga tcaccttatac aaacagggaa tgaaggctga gcatgctagc  
 180  
 tcgcttctag aactggcatc caccactaag tgtagctcag tgaaatatga tgttgaaata  
 240  
 gtagaggaat acttcgctcg acagatctca tccttctgta gtatcgactg tgccaccatc  
 300  
 ttgcagctgc atgaaattcc cagtctgcag tccatctaca cccttgatgc cgcgattcta  
 360  
 aaaggcccag gtcttttttg gatgagcatt tttctaagat ggctgctgag actgacctc  
 420  
 ataagtcgtc tgagattacc aagaacctac ttccagccac gctgcaactc attgacacct  
 480  
 atgcacgtt caccagagcc tatttgctgc aaaactttaa tgaagagggg acaactgaga  
 540  
 aaccttccaa ggagaaactg caaggctttg ctgctgtttt ggctattggc tctagcaggt  
 600  
 gcaaggcaaa tactctgggt ccgacactgg ttcagaattt gccatcgtca gtgcagactg  
 660  
 tgtgtgagtc ctggaacaac atcaatacca atgaatttcc caatattgga tcctggcgca  
 720  
 atgcctttgc caatgacacc atcccttcac gcgt  
 754

&lt;210&gt; 2458

&lt;211&gt; 236

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2458

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Asn | Ser | Pro | Glu | Met | Ser | Glu | Cys | Asp | Ile | Leu | His | Thr | Leu | Arg |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Trp | Ser | Ser | Arg | Leu | Arg | Ile | Ser | Ser | Tyr | Val | Asn | Trp | Ile | Lys | Asp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| His | Leu | Ile | Lys | Gln | Gly | Met | Lys | Ala | Glu | His | Ala | Ser | Ser | Leu | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Glu | Leu | Ala | Ser | Thr | Thr | Lys | Cys | Ser | Ser | Val | Lys | Tyr | Asp | Val | Glu |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Ile | Val | Glu | Glu | Tyr | Phe | Ala | Arg | Gln | Ile | Ser | Ser | Phe | Cys | Ser | Ile |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |
| Asp | Cys | Ala | Thr | Ile | Leu | Gln | Leu | His | Glu | Ile | Pro | Ser | Leu | Gln | Ser |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ile | Tyr | Thr | Leu | Asp | Ala | Ala | Ile | Leu | Lys | Gly | Pro | Gly | Leu | Phe | Gly |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Met | Ser | Ile | Phe | Leu | Arg | Trp | Leu | Leu | Arg | Leu | Ile | Leu | Ile | Ser | Arg |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Leu | Arg | Leu | Pro | Arg | Thr | Tyr | Phe | Gln | Pro | Arg | Cys | Asn | Ser | Leu | Thr |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Pro | Met | His | Arg | Ser | Pro | Glu | Pro | Ile | Cys | Cys | Lys | Thr | Leu | Met | Lys |

```

145          150          155          160
Arg Glu Gln Leu Arg Asn Leu Pro Arg Arg Asn Cys Lys Ala Leu Leu
          165          170          175
Leu Phe Trp Leu Leu Ala Leu Ala Gly Ala Arg Gln Ile Leu Trp Val
          180          185          190
Arg His Trp Phe Arg Ile Cys His Arg Gln Cys Arg Leu Cys Val Ser
          195          200          205
Pro Gly Thr Thr Ser Ile Pro Met Asn Phe Pro Ile Leu Asp Pro Gly
          210          215          220
Ala Met Pro Leu Pro Met Thr Pro Ser Leu His Ala
225          230          235

```

<210> 2459  
 <211> 382  
 <212> DNA  
 <213> Homo sapiens

```

<400> 2459
accggtgcac agatcggtct ggccgcgtgc actgccccgc tcaagcaaat cgctatcaac
60
gctggtccttg agggcggcgt cgtggctgag aaggtcgctg gtctgccccg aggacagggc
120
ctcaacgcgg ccaatgacga gtatgtcgac atggttagagg ccggcatcat tgacccggcc
180
aaggtagacc gttcggctct gcagaacgcc gcgtccatcg cgccctgtt cctcaccact
240
gaagccgtca tcgctgacaa gcccagacct gttaaggctc ccgctggcgg cggtgatatg
300
gacggtatgg gtggcatggg cggcatgatg tgatcgtgta ttgccttcgc tgatttgagt
360
gggatgccac tttgccccag gc
382

```

<210> 2460  
 <211> 110  
 <212> PRT  
 <213> Homo sapiens

```

<400> 2460
Thr Gly Ala Gln Ile Val Leu Ala Ala Cys Thr Ala Pro Leu Lys Gln
1          5          10          15
Ile Ala Ile Asn Ala Gly Leu Glu Gly Gly Val Val Ala Glu Lys Val
          20          25          30
Ala Gly Leu Pro Ala Gly Gln Gly Leu Asn Ala Ala Asn Asp Glu Tyr
          35          40          45
Val Asp Met Val Glu Ala Gly Ile Ile Asp Pro Ala Lys Val Thr Arg
          50          55          60
Ser Ala Leu Gln Asn Ala Ala Ser Ile Ala Ala Leu Phe Leu Thr Thr
65          70          75          80
Glu Ala Val Ile Ala Asp Lys Pro Glu Pro Val Lys Ala Pro Ala Gly
          85          90          95
Gly Gly Asp Met Asp Gly Met Gly Gly Met Gly Gly Met Met
          100          105          110

```

<210> 2461  
 <211> 558  
 <212> DNA  
 <213> Homo sapiens

<400> 2461  
 tccggacaaa agggttcaat cgaagtatgg ttagcctttt ccaagtcgcc aggacggacc  
 60  
 tgcaatgctg tttgtcgtca tgctcggggg caagcaccca cgggctaaaa tcgaaattca  
 120  
 cgatgtggta ttcgcagtcg cggatacgct gcaacacacc tacacccaat tgcgcgacgg  
 180  
 ctgggttcggc agccctaagg tgtgcatatc gatgcgtgga tggccgtcga tggcgtcgac  
 240  
 ggctggaaaag tcgaactcag ccagatggcg ccgcctgccg acgcgcacatca cctgtacttc  
 300  
 atcaacctcg gcggctacga ggccaacgct tttggcgagg cccatcatta cctgctggtg  
 360  
 gtcgcccggg acaaacagga agccaagcgc aaggggcagc ggcaaatgtt gcaacactgg  
 420  
 tcccaggccc acaccgatgg cgtaatggat atcgacgact gcttgccgat tgatctggtg  
 480  
 gacggtcgct atgttcacct ggtgcaaggc ccgcaccagc cgatcatcca gcacaacgac  
 540  
 tacatcatcc tgccgcga  
 558

<210> 2462  
 <211> 148  
 <212> PRT  
 <213> Homo sapiens

<400> 2462  
 Met Val Ser Leu Phe Gln Val Ala Arg Thr Asp Leu Gln Cys Cys Leu  
 1 5 10 15  
 Ser Ser Cys Ser Gly Ala Ser Thr His Gly Leu Lys Ser Lys Phe Thr  
 20 25 30  
 Met Trp Tyr Ser Gln Ser Arg Ile Arg Cys Asn Thr Pro Thr Pro Asn  
 35 40 45  
 Cys Ala Thr Ala Gly Ser Ala Ala Leu Arg Cys Ala Tyr Arg Cys Val  
 50 55 60  
 Asp Gly Arg Arg Trp Arg Arg Arg Leu Glu Ser Arg Thr Gln Pro Asp  
 65 70 75 80  
 Gly Ala Ala Cys Arg Arg Ala Ser Pro Val Leu His Gln Pro Arg Arg  
 85 90 95  
 Leu Arg Gly Gln Arg Phe Trp Arg Gly Pro Ser Leu Pro Ala Gly Gly  
 100 105 110  
 Arg Pro Gly Gln Thr Gly Ser Gln Ala Gln Gly Ala Ala Asn Val  
 115 120 125  
 Ala Thr Leu Val Pro Gly Pro His Arg Trp Arg Asn Gly Tyr Arg Arg  
 130 135 140  
 Leu Leu Ala Asp  
 145

<210> 2463  
 <211> 333  
 <212> DNA  
 <213> Homo sapiens

<400> 2463  
 cccagggggt aagccatgag cctgttgagc caagtggccc gggcgccgtt gagcgccaag  
 60  
 ttcggcctgc tgattattct gttatacgtc gcgctggcgc tgtgngcgcc gctgctggcg  
 120  
 ccctatggcg aaaccaggt ggtgggtgaa ggcttcgcgc cgtggagcgg ccagtttttg  
 180  
 ctgggcaccg ataacctggg gcgcgacatg ttcagccgcc tgatgtacgg cgcgcgcaat  
 240  
 accttgggca ttgccttcct gacgacgacg ctggcgtttc tgctcgggtg tttgagcggg  
 300  
 ttggtcgcgg cgatcaaggg cggttgggtc gac  
 333

<210> 2464  
 <211> 106  
 <212> PRT  
 <213> Homo sapiens

<400> 2464  
 Met Ser Leu Leu Ser Gln Val Ala Arg Ala Pro Leu Ser Ala Lys Phe  
 1 5 10 15  
 Gly Leu Leu Ile Ile Leu Leu Tyr Val Ala Leu Ala Leu Xaa Ala Pro  
 20 25 30  
 Leu Leu Ala Pro Tyr Gly Glu Thr Gln Val Val Gly Glu Gly Phe Ala  
 35 40 45  
 Pro Trp Ser Gly Gln Phe Leu Leu Gly Thr Asp Asn Leu Gly Arg Asp  
 50 55 60  
 Met Phe Ser Arg Leu Met Tyr Gly Ala Arg Asn Thr Leu Gly Ile Ala  
 65 70 75 80  
 Phe Leu Thr Thr Thr Leu Ala Phe Leu Leu Gly Gly Leu Ser Gly Leu  
 85 90 95  
 Val Ala Ala Ile Lys Gly Gly Trp Val Asp  
 100 105

<210> 2465  
 <211> 434  
 <212> DNA  
 <213> Homo sapiens

<400> 2465  
 nntcatgagg acatttcctt catatttggt ggtggtaaatt ccctcctggg acacggggaa  
 60  
 atgaccagag gctggcggcc cacctggcag gaacagatgc cagctctgct gcagccatcg  
 120  
 ccccttgagc ggggtggctct gtgcctcttt ctgcactgct ggtgggtggg gctgttggtg  
 180  
 ggggtgatgga taccggctgc cagagatggc tcaggtgcca gctgctgggc tatctcaggc  
 240

actggctgct gggctatctc gggtgccggc tgctgggcta tctcaggcgc tggtgctgc  
 300  
 tgggctgtct cgggtgctgg ctgttgggac gtctcctgtc ctggcactgg gctctcgggt  
 360  
 gctgggtgcc agctgctgcc taccttgacac tgggctctgg gcactcactg cactcggggt  
 420  
 tttccatctc cgac  
 434

<210> 2466  
 <211> 82  
 <212> PRT  
 <213> Homo sapiens

<400> 2466  
 Trp Ile Pro Ala Ala Arg Asp Gly Ser Gly Ala Ser Cys Trp Ala Ile  
 1 5 10 15  
 Ser Gly Thr Gly Cys Trp Ala Ile Ser Gly Ala Gly Cys Trp Ala Ile  
 20 25 30  
 Ser Gly Ala Gly Cys Cys Trp Ala Val Ser Gly Ala Gly Cys Trp Asp  
 35 40 45  
 Val Ser Cys Pro Gly Thr Gly Leu Ser Gly Ala Gly Cys Gln Leu Leu  
 50 55 60  
 Pro Thr Leu His Trp Ala Leu Gly Thr His Cys Thr Arg Ala Phe Pro  
 65 70 75 80  
 Ser Pro

<210> 2467  
 <211> 306  
 <212> DNA  
 <213> Homo sapiens

<400> 2467  
 atggactcca ccggcaccgg agcaggggggt aaggggaaga agggagcggc cgggcgcaag  
 60  
 gtcggcgggc caaggaagaa gtcgggtgtcg aggtccgtga aggccgggtct ccagttcccc  
 120  
 gtcggccgca tcgggcgcta cttgaagaag ggccgctacg cgcagcgtgt cggcaccggc  
 180  
 gccccgtct acctcgccgc tgtcctcgaa tacctcgccg ctgaggttct ggagctcgcc  
 240  
 ggtaatgctg ccagggacaa caagaagact cgcattattc cgcgccacgt gcttctggcg  
 300  
 atccgg  
 306

<210> 2468  
 <211> 102  
 <212> PRT  
 <213> Homo sapiens

<400> 2468  
 Met Asp Ser Thr Gly Thr Gly Ala Gly Gly Lys Gly Lys Lys Gly Ala



```

      1           5           10           15
Ala Gly Arg Lys Val Gly Gly Pro Arg Lys Lys Ser Val Ser Arg Ser
      20           25           30
Val Lys Ala Gly Leu Gln Phe Pro Val Gly Arg Ile Gly Arg Tyr Leu
      35           40           45
Lys Lys Gly Arg Tyr Ala Gln Arg Val Gly Thr Gly Ala Pro Val Tyr
      50           55           60
Leu Ala Ala Val Leu Glu Tyr Leu Ala Ala Glu Val Leu Glu Leu Ala
      65           70           75           80
Gly Asn Ala Ala Arg Asp Asn Lys Lys Thr Arg Ile Ile Pro Arg His
      85           90           95
Val Leu Leu Ala Ile Arg
      100

```

&lt;210&gt; 2469

&lt;211&gt; 489

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2469

```

gccggcgtgg cacatggctt ccctgaagcc agcattgccc tggccaagga agctttgcag
60
aacagatgag atttcagctg ggacttgcag ccaagtggga tttggccttt tggggagaag
120
ggaaagggca ttcaaaggcc agggacagag tatggtcaaa ggcatggaga tgaggaagag
180
gggaccagag cagaggggtca ggttggaag cgagttgggg tcaatctgca aaggggctga
240
cgtgccaggt aaaaaacagg agcacagttt agttttgtcg gatcatttca ggtggaaggg
300
cagtgggaat gttggagaaa acactttttg gtgtcggttac attgaatctg ctcatttata
360
agaataaaac tttatttcat agagttattg tatggctcaa aataggtatg aagaattaag
420
aaaaagaatt ttagatttaa aatgaaaagg cacctacaaa agtagagtgg tagagttacc
480
aacgtggag
489

```

&lt;210&gt; 2470

&lt;211&gt; 115

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2470

```

Met Ala Ser Leu Lys Pro Ala Leu Pro Trp Pro Arg Lys Leu Cys Arg
      1           5           10           15
Thr Asp Glu Ile Ser Ala Gly Thr Cys Ser Gln Val Gly Phe Gly Leu
      20           25           30
Leu Gly Arg Arg Glu Arg Ala Phe Lys Gly Gln Gly Gln Ser Met Val
      35           40           45
Lys Gly Met Glu Met Arg Lys Arg Gly Pro Glu Gln Arg Val Arg Leu
      50           55           60
Glu Ser Glu Leu Gly Ser Ile Cys Lys Gly Ala Asp Val Pro Gly Lys

```

```
<210> 2471
<211> 779
<212> DNA
<213> Homo sapiens
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```
<210> 2472
<211> 181
<212> PRT
<213> Homo sapiens
```

1779

```

      50              55              60
Lys Leu Leu Ile Leu Leu Arg Ala Ser Glu Gly Val Phe Cys Asp Arg
65              70              75              80
Met Asn Gly Ile His Ile Asp Pro Gly Thr Ile Gly Val Tyr Gly Lys
      85              90              95
Val His Leu Tyr Ser Ala Tyr Pro Lys Asn Ser Trp Thr His Leu Gly
      100              105              110
Ala Asp Ile Ala Ser Gly Asn Glu Arg Ile Ile Val Glu Asp Ala Val
      115              120              125
Asp Trp Arg Pro His Asp Lys Ile Val Leu Ser Ser Ser Ser Tyr Glu
      130              135              140
Pro His Glu Ala Glu Val Leu Thr Val Lys Glu Val Lys Gly His His
145              150              155              160
Val Arg Ile Tyr Glu Arg Leu Lys His Arg His Ile Gly Ser Val His
      165              170              175
Val Thr Glu Asp Gly
      180

```

<210> 2473  
 <211> 698  
 <212> DNA  
 <213> Homo sapiens

```

<400> 2473
nngtgacca agaaatggca gcctgacaag ctgggtggtgg tatggactcg gcggaaccga
60
cgcactctgct ccaaggccca cagctggcag ccgnnggcat ccagaacca taccggggca
120
ccgtggtgtg gatggtacnc tgagaatgtg gacatctctg tgaccctcta cagggacccc
180
cacgtggacc agtatgagga caaagagtgg acatttatta ttgaaaatga gtctaagggg
240
cagcggaagg tgctggccac ggccgaggtg gacctggccc gccatgccag ggcccgtgcc
300
ntgtccaagt ccnactgag gctgcggctg aagccaaagt cagtgaagac ggtgcaggct
360
gagctgagcc tcactctttc cggggtgctg ctgcgggagg gccgtgccac ggacgatgac
420
atgcagagtc tcgcaagcct catgagtgtg aagcctagt atgtgggcaa cttgggatgac
480
tttctgaga gtgatgaaga tgaggctcat ggcccaggag ccccgaggc cggggctcga
540
gtccccagc caggtgggct cacagcctgc tgtggatcga gactgccaag acctggggag
600
ggagggttac ccgggccacc agccacttgc tgtgcccgcc ctgtgatggg aactcattac
660
tgcccaggca gtcccaacca acccagcagc ctcaattg
698

```

<210> 2474  
 <211> 232  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 2474

Xaa Cys Thr Lys Lys Trp Gln Pro Asp Lys Leu Val Val Val Trp Thr  
 1 5 10 15  
 Arg Arg Asn Arg Arg Ile Cys Ser Lys Ala His Ser Trp Gln Pro Xaa  
 20 25 30  
 Ala Ser Arg Thr His Thr Gly Ala Pro Trp Cys Gly Trp Tyr Xaa Glu  
 35 40 45  
 Asn Val Asp Ile Ser Val Thr Leu Tyr Arg Asp Pro His Val Asp Gln  
 50 55 60  
 Tyr Glu Ala Lys Glu Trp Thr Phe Ile Ile Glu Asn Glu Ser Lys Gly  
 65 70 75 80  
 Gln Arg Lys Val Leu Ala Thr Ala Glu Val Asp Leu Ala Arg His Ala  
 85 90 95  
 Arg Ala Arg Ala Xaa Ser Lys Ser Xaa Leu Arg Leu Arg Leu Lys Pro  
 100 105 110  
 Lys Ser Val Lys Thr Val Gln Ala Glu Leu Ser Leu Thr Leu Ser Gly  
 115 120 125  
 Val Leu Leu Arg Glu Gly Arg Ala Thr Asp Asp Asp Met Gln Ser Leu  
 130 135 140  
 Ala Ser Leu Met Ser Val Lys Pro Ser Asp Val Gly Asn Leu Asp Asp  
 145 150 155 160  
 Phe Ala Glu Ser Asp Glu Asp Glu Ala His Gly Pro Gly Ala Pro Glu  
 165 170 175  
 Ala Arg Ala Arg Val Pro Gln Pro Gly Gly Leu Thr Ala Cys Cys Gly  
 180 185 190  
 Ser Arg Leu Pro Arg Pro Gly Glu Gly Gly Leu Pro Gly Pro Pro Ala  
 195 200 205  
 Thr Cys Cys Ala Arg Pro Val Met Gly Thr His Tyr Cys Pro Gly Ser  
 210 215 220  
 Pro Asn Gln Pro Ser Ser Leu Asn  
 225 230

&lt;210&gt; 2475

&lt;211&gt; 1251

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2475

ngcgcgcccc agatgcaggt gagcaagagg atgctggcgg ggggcgtgag gagcatgccc  
 60  
 agccccctcc tggcctgctg gcagcccatc ctctgctgg tgctgggctc agtgctgtca  
 120  
 ggctcggcca cgggctgccc gccccgctgc gactgctccg cccaggaccg cgctgtgctg  
 180  
 tgccaccgca agcgctttgt ggcagtcccc gagggcatcc ccaccgagac gcgcctgctg  
 240  
 gacctaggca agaaccgcat caaaacgctc aaccaggacg agttcgccag cttccccgac  
 300  
 ctggaggagc tggagctcaa cgagaacatc gtgagcgccg tggagcccgg cgccttcaac  
 360  
 aacctcttca acctccggac gctgggtctc cgcagcaacc gcctgaagct catccccgta  
 420  
 ggcgtcttca ctggcctcag caacctgacc aagctggaca tcagcgagaa caagatcggt  
 480

atcctactgg actacatgtt tcaggacctg tacaacctca agtcactgga gggtggcgac  
 540  
 aatgacctcg tctacatctc tcaccgcgcc ttcagcggcc tcaacagcct ggagcagctg  
 600  
 acgctggaga aatgcaacct gacctccatc cccaccgagg cgctgtccca cctgcacggc  
 660  
 ctcatcgctc tgaggctccg gcacctcaac atcaatgcca tccgggacta ctccttcaag  
 720  
 aggtgtgacc gactcaaggt cttggagatc tcccactggc cctacttgga caccatgaca  
 780  
 cccaactgcc tctacggcct caacctgacg tccctgtcca tcacacactg caatctgacc  
 840  
 gctgtgccct acctggcctg ccgccacctg gtctatctcc gcttctctaa cctctctac  
 900  
 aaccccatca gcaccattga gggctccatg ttgcatgagc tgctccggct gcaggagatc  
 960  
 cagctgggtgg gcgggcagct ggccgggtgg agccctgcct tccgcggcct caactacctg  
 1020  
 cgcgtgctca atgtctctgg caaccagctg accacactgg aggaatcagt cttccactcg  
 1080  
 gtgggcaacc tggagacact catcctggac tccaaccgcg tggcctgcga ctgtcggtc  
 1140  
 ctgtgggtgt tccggcgccg tggcctacaa acttcaaccg gcagcagccc acgtgcgcca  
 1200  
 cgcccgagtt tgtccagggg caaggagttc aaggacttcc ctgatgtgct a  
 1251

<210> 2476

<211> 417

<212> PRT

<213> Homo sapiens

<400> 2476

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Ala | Pro | Glu | Met | Gln | Val | Ser | Lys | Arg | Met | Leu | Ala | Gly | Gly | Val |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Arg | Ser | Met | Pro | Ser | Pro | Leu | Leu | Ala | Cys | Trp | Gln | Pro | Ile | Leu | Leu |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Leu | Val | Leu | Gly | Ser | Val | Leu | Ser | Gly | Ser | Ala | Thr | Gly | Cys | Pro | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Arg | Cys | Glu | Cys | Ser | Ala | Gln | Asp | Arg | Ala | Val | Leu | Cys | His | Arg | Lys |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Arg | Phe | Val | Ala | Val | Pro | Glu | Gly | Ile | Pro | Thr | Glu | Thr | Arg | Leu | Leu |
|     |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     | 80  |     |
| Asp | Leu | Gly | Lys | Asn | Arg | Ile | Lys | Thr | Leu | Asn | Gln | Asp | Glu | Phe | Ala |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ser | Phe | Pro | His | Leu | Glu | Glu | Leu | Glu | Leu | Asn | Glu | Asn | Ile | Val | Ser |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Ala | Val | Glu | Pro | Gly | Ala | Phe | Asn | Asn | Leu | Phe | Asn | Leu | Arg | Thr | Leu |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Gly | Leu | Arg | Ser | Asn | Arg | Leu | Lys | Leu | Ile | Pro | Leu | Gly | Val | Phe | Thr |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Gly | Leu | Ser | Asn | Leu | Thr | Lys | Leu | Asp | Ile | Ser | Glu | Asn | Lys | Ile | Val |
|     |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     | 160 |     |
| Ile | Leu | Leu | Asp | Tyr | Met | Phe | Gln | Asp | Leu | Tyr | Asn | Leu | Lys | Ser | Leu |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-----|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-----|
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 165 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 170 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 175 |
| Glu | Val | Gly | Asp | Asn | Asp | Leu | Val | Tyr | Ile | Ser | His | Arg | Ala | Phe | Ser |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 180 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 185 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 190 |
| Gly | Leu | Asn | Ser | Leu | Glu | Gln | Leu | Thr | Leu | Glu | Lys | Cys | Asn | Leu | Thr |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 195 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 200 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 205 |
| Ser | Ile | Pro | Thr | Glu | Ala | Leu | Ser | His | Leu | His | Gly | Leu | Ile | Val | Leu |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 210 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 215 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 220 |
| Arg | Leu | Arg | His | Leu | Asn | Ile | Asn | Ala | Ile | Arg | Asp | Tyr | Ser | Phe | Lys |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 225 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 230 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 235 |
| Arg | Leu | Tyr | Arg | Leu | Lys | Val | Leu | Glu | Ile | Ser | His | Trp | Pro | Tyr | Leu |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 245 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 250 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 255 |
| Asp | Thr | Met | Thr | Pro | Asn | Cys | Leu | Tyr | Gly | Leu | Asn | Leu | Thr | Ser | Leu |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 260 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 265 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 270 |
| Ser | Ile | Thr | His | Cys | Asn | Leu | Thr | Ala | Val | Pro | Tyr | Leu | Ala | Val | Arg |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 275 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 280 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 285 |
| His | Leu | Val | Tyr | Leu | Arg | Phe | Leu | Asn | Leu | Ser | Tyr | Asn | Pro | Ile | Ser |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 290 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 295 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 300 |
| Thr | Ile | Glu | Gly | Ser | Met | Leu | His | Glu | Leu | Leu | Arg | Leu | Gln | Glu | Ile |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 305 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 310 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 315 |
| Gln | Leu | Val | Gly | Gly | Gln | Leu | Ala | Gly | Trp | Ser | Pro | Ala | Phe | Arg | Gly |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 325 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 330 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 335 |
| Leu | Asn | Tyr | Leu | Arg | Val | Leu | Asn | Val | Ser | Gly | Asn | Gln | Leu | Thr | Thr |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 340 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 345 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 350 |
| Leu | Glu | Glu | Ser | Val | Phe | His | Ser | Val | Gly | Asn | Leu | Glu | Thr | Leu | Ile |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 355 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 360 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 365 |
| Leu | Asp | Ser | Asn | Pro | Leu | Ala | Cys | Asp | Cys | Arg | Leu | Leu | Trp | Val | Phe |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 370 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 375 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 380 |
| Arg | Arg | Arg | Gly | Leu | Gln | Thr | Ser | Thr | Gly | Ser | Ser | Pro | Arg | Ala | Pro |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 385 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 390 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 395 |
| Arg | Pro | Ser | Leu | Ser | Arg | Gly | Lys | Glu | Phe | Lys | Asp | Phe | Pro | Asp | Val |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 405 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 410 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 415 |
| Leu |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |     |

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<210> 2477
<211> 548
<212> DNA
<213> Homo sapiens
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<400> 2477
nagactgcga tcagacgcgc gtgccagct gaaccagggtg cgtgagaagg ctgccttcag
60
gtggccgggg gctccctcca gctgtctctg gacggaggga cgggaagtgg ccagaagggg
120
aagtgtgagg agttcccgtc cagcctgtca tcagtctccc caggctctga agcggcggcc
180
ctgtcctctg ccgtgaccat ggaccctctg gagacccta tcaaggatgg catcctctac
240
cagcagcatg tcaagtttgg caagaagtgc tggcggaagg tgtgggctct gctgtatgca
300
ggaggcccat caggcgtggc acggctggag aactgggagg tccgggatgg tggcctggga
360
gcagcgggtg acaggtcggc ggggcctggc cggcgagggg agcgacgggt catccgcctg
420
```

gctgactgtg tgtccgtgct gccggctgac ggcgagagct gcccccgga caccggtgcc  
 480  
 ttctctgtca ccaccaccga gcgaagccat ctactggctg ctcagcaccg ccaggcctgg  
 540  
 atggggccc  
 548

<210> 2478<211> 113

<212> PRT

<213> Homo sapiens

<400> 2478

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Glu | Thr | Pro | Ile | Lys | Asp | Gly | Ile | Leu | Tyr | Gln | Gln | His | Val | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Phe | Gly | Lys | Lys | Cys | Trp | Arg | Lys | Val | Trp | Ala | Leu | Leu | Tyr | Ala | Gly |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gly | Pro | Ser | Gly | Val | Ala | Arg | Leu | Glu | Asn | Trp | Glu | Val | Arg | Asp | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Gly | Leu | Gly | Ala | Ala | Gly | Asp | Arg | Ser | Ala | Gly | Pro | Gly | Arg | Arg | Gly |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Glu | Arg | Arg | Val | Ile | Arg | Leu | Ala | Asp | Cys | Val | Ser | Val | Leu | Pro | Ala |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Asp | Gly | Glu | Ser | Cys | Pro | Arg | Asp | Thr | Gly | Ala | Phe | Leu | Leu | Thr | Thr |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Thr | Glu | Arg | Ser | His | Leu | Leu | Ala | Ala | Gln | His | Arg | Gln | Ala | Trp | Met |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |

Gly

<210> 2479

<211> 324

<212> DNA

<213> Homo sapiens

<400> 2479

gaattcatgg aggtctatga ggaggatgaa gaatatgcgt atgaaaaata tgaaacccat  
 60  
 ttcggcacga gctggatgga ggagaccgca ggcaccttct cactgaactg gtatcgcagc  
 120  
 aggtactgga atgacaatga agcagcagaa aggcttgctg tgatgtgggc taaaaccttc  
 180  
 aaatatgcgt cgataaacgt ctctggcag accgggatta gcaatagcga cgacgagggc  
 240  
 aatgaagatg aagacatgtt ctacgccggt atctccattc cgctgggagg cggggcgtag  
 300  
 tctaactcct ggtatcgtga atat  
 324

<210> 2480

<211> 108

<212> PRT

<213> Homo sapiens

<400> 2480

```

Glu Phe Met Glu Val Tyr Glu Glu Asp Glu Glu Tyr Ala Tyr Glu Lys
 1           5           10           15
Tyr Glu Thr His Phe Gly Thr Ser Trp Met Glu Glu Thr Ala Gly Thr
      20           25           30
Phe Ser Leu Asn Trp Tyr Arg Ser Arg Tyr Trp Asn Asp Asn Glu Ala
      35           40           45
Ala Glu Arg Leu Ala Leu Met Trp Ala Lys Thr Phe Lys Tyr Ala Ser
      50           55           60
Ile Asn Val Ser Trp Gln Thr Gly Ile Ser Asn Ser Asp Asp Glu Gly
65           70           75           80
Asn Glu Asp Glu Asp Met Phe Tyr Ala Gly Ile Ser Ile Pro Leu Gly
      85           90           95
Gly Gly Ala Tyr Ser Asn Ser Trp Tyr Arg Glu Tyr
      100           105

```

&lt;210&gt; 2481

&lt;211&gt; 484

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2481

```

gcgttcacta acgcttcaac aaactcttac aagcgtcttg ttcttggttt cgaagcacct
60
gttatgttgg cttactcagc tcgtaaccgt tctgcttcta tccgtatccc atacgttgca
120
agccctaaag gcaagcgtat tgaagctcgt ttccctgata caaccgctaa cccataccta
180
gcattttcag ctatgttgat ggctgggtatc gatgggtatca aaaacaagat tcaccctggc
240
gatgcagcag acaaagattt gtacgacctt ccagctgaag aagcagccgc tatccctcaa
300
gttgctagca gcttagaaga agcgcttaag tgcctagatc aagaccgtga gttcttgact
360
caagggtggcg ttttctctga cgacatgata gatgcttaca tcgctcttaa agcagaagaa
420
gcacagcgtg ttgcaatgac aacaacacca cttgagttcg aactttacta cagcctataa
480
gctt
484

```

&lt;210&gt; 2482

&lt;211&gt; 159

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2482

```

Ala Phe Thr Asn Ala Ser Thr Asn Ser Tyr Lys Arg Leu Val Pro Gly
 1           5           10           15
Phe Glu Ala Pro Val Met Leu Ala Tyr Ser Ala Arg Asn Arg Ser Ala
      20           25           30
Ser Ile Arg Ile Pro Tyr Val Ala Ser Pro Lys Gly Lys Arg Ile Glu
      35           40           45
Ala Arg Phe Pro Asp Pro Thr Ala Asn Pro Tyr Leu Ala Phe Ser Ala
      50           55           60

```



Met Leu Met Ala Gly Ile Asp Gly Ile Lys Asn Lys Ile His Pro Gly  
 65 70 75 80  
 Asp Ala Ala Asp Lys Asp Leu Tyr Asp Leu Pro Ala Glu Glu Ala Ala  
 85 90 95  
 Ala Ile Pro Gln Val Ala Ser Ser Leu Glu Glu Ala Leu Lys Cys Leu  
 100 105 110  
 Asp Gln Asp Arg Glu Phe Leu Thr Gln Gly Gly Val Phe Ser Asp Asp  
 115 120 125  
 Met Ile Asp Ala Tyr Ile Ala Leu Lys Ala Glu Glu Ala Gln Arg Val  
 130 135 140  
 Ala Met Thr Thr Thr Pro Leu Glu Phe Glu Leu Tyr Tyr Ser Leu  
 145 150 155

&lt;210&gt; 2483

&lt;211&gt; 477

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2483

acgcgtgtta gccaaatctt ggttctctcc gttctctcct tacccgagcc tgaggcccctt  
 60  
 ctggagaaca ggcagcctct gaggaacct ctgatccccg atcagccacc ccacgcctg  
 120  
 cgtccccagc cgcttctctc tggccttggt cccctctccc tgtgaaggag agaacagttt  
 180  
 cggctggccc tgagatgctg gcaggcctgc agtcaggcca gtgggcgcct cccaccttga  
 240  
 aatggctcctt cgtggtgcag ttctgcttac ggggtagact ttgttgctt ccacagagga  
 300  
 cagttagggt gggcaggaag gaagtctctg ccacaagtct gcattccagg ctgtttccag  
 360  
 aagtgggaat tctctcgtgc cctggagtct gggaatgcat ttttagtttc ccagcttcag  
 420  
 gtagaattga aattgagtga gccaaaccac cacatccatc tggagccagg aactagt  
 477

&lt;210&gt; 2484

&lt;211&gt; 130

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2484

Met His Ser Gln Thr Pro Gly His Glu Arg Ile Pro Thr Ser Gly Asn  
 1 5 10 15  
 Ser Leu Glu Cys Arg Leu Val Ala Glu Thr Ser Phe Leu Pro Thr Leu  
 20 25 30  
 Thr Val Leu Cys Gly Arg Gln Gln Ser Leu Pro Arg Lys Gln Asn Cys  
 35 40 45  
 Thr Thr Lys Asp His Phe Lys Val Gly Gly Ala His Cys Pro Asp Cys  
 50 55 60  
 Arg Pro Ala Ser Ile Ser Gly Pro Ala Glu Thr Val Leu Ser Phe Thr  
 65 70 75 80  
 Gly Lys Gly Glu Gln Gly Gln Glu Glu Ala Ala Gly Asp Ala Gly Asp  
 85 90 95

Gly Val Ala Asp Arg Gly Ser Glu Val Ser Ser Glu Ala Ala Cys Ser  
                   100                  105                  110  
 Pro Glu Gly Pro Gln Ala Arg Val Arg Arg Glu Arg Glu Glu Pro Arg  
                   115                  120                  125  
 Phe Gly  
           130

&lt;210&gt; 2485

&lt;211&gt; 608

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2485

accggtgagg cgaagtgcgg tggcaattac gcagcttcgc tgcgttccca gatcgatgcc  
 60  
 aagacccgcg actgcaacga ggtgctcttt gtcgatgcag ttgaacatcg ctggatcgag  
 120  
 gagctgggtg gtatgaactt catggccatc agcaaagacg gtcagctcgt ccccccgag  
 180  
 ctactgggca ccactctgcg tggcgtgacc cgcaagtcca ttctggaagt tgccccgac  
 240  
 ctcggtcttg aaccagtgga gcgcaagatc gatgttgacg agctccttga tggcgttcgc  
 300  
 tctggcgagt tcccggaggt cttcgccctgt ggtaccgccg cggttgtcac accgatcggc  
 360  
 tctttcctag atggagatac cgacgtgaag gtctctgagc ccaccggaaa gaccacgatg  
 420  
 gagatccgtc gccgtctgct ggatatccag ttcggacgcg ctgaggacac ccatggctgg  
 480  
 ttgaagcgag tctgctgacg gcgtcgacga ccattggggc cgcccccaat gatgtgttca  
 540  
 cgatcgggct acgacgggtg cgatgacaat gtcttgccgc tgggaagggtt gcccgacggg  
 600  
 gaacgcgt  
 608

&lt;210&gt; 2486

&lt;211&gt; 165

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2486

Thr Gly Glu Ala Lys Cys Gly Gly Asn Tyr Ala Ala Ser Leu Arg Ser  
   1                  5                  10                  15  
 Gln Ile Asp Ala Lys Thr Arg Asp Cys Asn Glu Val Leu Phe Val Asp  
           20                  25                  30  
 Ala Val Glu His Arg Trp Ile Glu Glu Leu Gly Gly Met Asn Phe Met  
           35                  40                  45  
 Ala Ile Ser Lys Asp Gly Gln Leu Val Thr Pro Glu Leu Ala Gly Thr  
           50                  55                  60  
 Ile Leu Arg Gly Val Thr Arg Lys Ser Ile Leu Glu Val Ala Pro Asp  
   65                  70                  75                  80  
 Leu Gly Leu Glu Pro Val Glu Arg Lys Ile Asp Val Asp Glu Leu Leu  
                   85                  90                  95

Asp Gly Val Arg Ser Gly Glu Phe Pro Glu Val Phe Ala Cys Gly Thr  
                   100                  105                  110  
 Ala Ala Val Val Thr Pro Ile Gly Ser Phe Leu Asp Gly Asp Thr Asp  
                   115                  120                  125  
 Val Lys Val Ser Glu Pro Thr Gly Lys Thr Thr Met Glu Ile Arg Arg  
                   130                  135                  140  
 Arg Leu Leu Asp Ile Gln Phe Gly Arg Ala Glu Asp Thr His Gly Trp  
 145                  150                  155                  160  
 Leu Lys Arg Val Cys  
                   165

&lt;210&gt; 2487

&lt;211&gt; 339

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2487

nnccctcag gagagcagcc catggaaggt ccccccaag gggcccctga gagccctgac  
 60  
 agtctgcaaa gaaaccagaa agagctccag ggcctcctga cccaggtgca agccctggag  
 120  
 aaggaggccg caagcagtgt ggacgtgcag gccctgcgga ggctctttga ggccgtgccc  
 180  
 cagctgggag gggctgctcc tcaggctcct gctgcccacc aaaagcccga ggcctcagtg  
 240  
 gagcaggcct ttggggagct gacacgggtc agcacggaag ttgctcaact gaaggaacag  
 300  
 accttggtaa ggctgctgga cattgaagag gctgtgcac  
 339

&lt;210&gt; 2488

&lt;211&gt; 113

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2488

Xaa Pro Ser Gly Glu Gln Pro Met Glu Gly Pro Pro Gln Gly Ala Pro  
 1                  5                  10                  15  
 Glu Ser Pro Asp Ser Leu Gln Arg Asn Gln Lys Glu Leu Gln Gly Leu  
                   20                  25                  30  
 Leu Thr Gln Val Gln Ala Leu Glu Lys Glu Ala Ala Ser Ser Val Asp  
                   35                  40                  45  
 Val Gln Ala Leu Arg Arg Leu Phe Glu Ala Val Pro Gln Leu Gly Gly  
                   50                  55                  60  
 Ala Ala Pro Gln Ala Pro Ala Ala His Gln Lys Pro Glu Ala Ser Val  
 65                  70                  75                  80  
 Glu Gln Ala Phe Gly Glu Leu Thr Arg Val Ser Thr Glu Val Ala Gln  
                   85                  90                  95  
 Leu Lys Glu Gln Thr Leu Val Arg Leu Leu Asp Ile Glu Glu Ala Val  
                   100                  105                  110  
 His

&lt;210&gt; 2489

&lt;211&gt; 594

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2489

nacgcgttct tcggactggc gacgatgctg atttctatcc cgacgggggt gaagctattt  
 60  
 aactggctgg tcaccatcta tcacggccgg gtgcgtatca ccagccaggt tctttggacc  
 120  
 ctgggcttca tggtagacctt cgcgatcgga ggcataccg gcgtactgct ggccatcccc  
 180  
 ggtgctgact tcgtactgca caacagcctg ttcggaattg ctcacttcca caacgtgatc  
 240  
 atcggcgggc cagtattcgg ctacatcgca ggtttcagct tctacttccc gaaagcggtc  
 300  
 ggcttcaagc tgcacgaaag ctggggcaag gctgcattct gggtctggat ctcgggcttc  
 360  
 ttcgtcgcgt tcatgccgct ctatgactg ggtttcatgg gcatgaccg ttgtttgaac  
 420  
 gccccccca cccctgagtg ggtcccgta ctgtacgttg ccatggtcgg tgcaactgat  
 480  
 atcgtgtcgt gtatcgctg ccagttgatt cagctgtatg tcagcgtgcg tgatcgcaag  
 540  
 cagaacatgt gcgaatccgg cgacccatgg aatgcacaca ccctggaatg gtcg  
 594

&lt;210&gt; 2490

&lt;211&gt; 198

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2490

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Ala | Phe | Phe | Gly | Leu | Ala | Thr | Met | Leu | Ile | Ser | Ile | Pro | Thr | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     | 15  |     |     |
| Val | Lys | Leu | Phe | Asn | Trp | Leu | Val | Thr | Ile | Tyr | His | Gly | Arg | Val | Arg |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     | 30  |     |     |     |
| Ile | Thr | Ser | Gln | Val | Leu | Trp | Thr | Leu | Gly | Phe | Met | Val | Thr | Phe | Ala |
|     | 35  |     |     |     |     | 40  |     |     |     | 45  |     |     |     |     |     |
| Ile | Gly | Gly | Met | Thr | Gly | Val | Leu | Leu | Ala | Ile | Pro | Gly | Ala | Asp | Phe |
|     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |
| Val | Leu | His | Asn | Ser | Leu | Phe | Gly | Ile | Ala | His | Phe | His | Asn | Val | Ile |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |
| Ile | Gly | Gly | Ala | Val | Phe | Gly | Tyr | Ile | Ala | Gly | Phe | Ser | Phe | Tyr | Phe |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Pro | Lys | Ala | Phe | Gly | Phe | Lys | Leu | His | Glu | Ser | Trp | Gly | Lys | Ala | Ala |
|     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |     |
| Phe | Trp | Phe | Trp | Ile | Ser | Gly | Phe | Phe | Val | Ala | Phe | Met | Pro | Leu | Tyr |
|     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |     |
| Ala | Leu | Gly | Phe | Met | Gly | Met | Thr | Arg | Cys | Leu | Asn | Ala | Pro | Pro | Thr |
|     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |     |
| Pro | Glu | Trp | Val | Pro | Tyr | Leu | Tyr | Val | Ala | Met | Val | Gly | Ala | Leu | Met |
| 145 |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |     |
| Ile | Ala | Val | Gly | Ile | Ala | Cys | Gln | Leu | Ile | Gln | Leu | Tyr | Val | Ser | Val |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |

Arg Asp Arg Lys Gln Asn Met Cys Glu Ser Gly Asp Pro Trp Asn Ala  
                   180                  185                  190  
 His Thr Leu Glu Trp Ser  
                   195

<210> 2491

<211> 592

<212> DNA

<213> Homo sapiens

<400> 2491

acgcgtcacg caactgtcaa acttgccaat cgcgttgacg atactcgccc ctacctacgc  
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 actacgttgt tgcctgggtct attccatgca gtaacgacga atatgtcgcg atctcaggat  
 120  
 gatcttgcag tgttcgaaag cggaactgta ttccgcgccg tcaactccggc tgcggcaccg  
 180  
 cgtcccgggtg tcgacgagcg cccctccgat gaagtccttg ccgagatcga cgccgccttg  
 240  
 ccagcccagc cgcgcatgct cgcggccgtg atctgtggca gctggctgcc cgatcgctgg  
 300  
 gatggagagt cggtaaggc tgactggcga cacgctgtgc tggtcgcca gaaggctgtg  
 360  
 gatgtctctg gcgtgaggct ggtgcgcaag gctgaccgtc aggctccatg gcatcccggt  
 420  
 cgttgtgcgg ctctcatcgt cgatgggaag gtcattggcc atgctggtga gttgcacccc  
 480  
 acagtagtgt cgaaggctgg tctgcctcag cgcacctgtg cggtcgagtt caatctagat  
 540  
 gctttggtag cctgcgctcc gagcgggtgt gaggtcatgg ttatttcaag gt  
 592

<210> 2492

<211> 197

<212> PRT

<213> Homo sapiens

<400> 2492

Thr Arg His Ala Thr Val Lys Leu Ala Asn Pro Leu Asp Asp Thr Arg  
   1                  5                  10                  15  
 Pro Tyr Leu Arg Thr Thr Leu Leu Pro Gly Leu Phe His Ala Val Thr  
                   20                  25                  30  
 Thr Asn Met Ser Arg Ser Gln Asp Asp Leu Ala Val Phe Glu Ser Gly  
                   35                  40                  45  
 Thr Val Phe Arg Ala Val Thr Pro Ala Ala Ala Pro Arg Pro Gly Val  
                   50                  55                  60  
 Asp Glu Arg Pro Ser Asp Glu Val Leu Ala Glu Ile Asp Ala Ala Leu  
   65                  70                  75                  80  
 Pro Ala Gln Pro Arg Met Leu Ala Ala Val Ile Cys Gly Ser Trp Leu  
                   85                  90                  95  
 Pro Asp Arg Trp Asp Gly Glu Ser Val Lys Ala Asp Trp Arg His Ala  
                   100                  105                  110  
 Val Leu Val Ala Gln Lys Ala Ala Asp Ala Leu Gly Val Arg Leu Val  
                   115                  120                  125

Arg Lys Ala Asp Arg Gln Ala Pro Trp His Pro Gly Arg Cys Ala Ala  
 130 135 140  
 Leu Ile Val Asp Gly Lys Val Ile Gly His Ala Gly Glu Leu His Pro  
 145 150 155 160  
 Thr Val Val Ser Lys Ala Gly Leu Pro Gln Arg Thr Cys Ala Val Glu  
 165 170 175  
 Phe Asn Leu Asp Ala Leu Val Ala Cys Ala Pro Ser Gly Gly Glu Val  
 180 185 190  
 Met Val Ile Ser Arg  
 195

<210> 2493  
 <211> 418  
 <212> DNA  
 <213> Homo sapiens

<400> 2493  
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 cccacacact atgagccgtc gctgcgtgac gttcggaccg tcgtgtattc gagagtcgcg  
 120  
 ctatcgaact acctcatgct cgaacctcat tcggtcatca agaccatcga ctcttccta  
 180  
 cctacgggat ctatcaatgt ctccctggct gaggaagccc aaaagtacgg cgcacaagtg  
 240  
 atcccgtctgg ttgaaaatgc caacctagac accgtgtggc tgggggttgcg cgtcattggc  
 300  
 aagggcgcca ggcggggagc cgaccgctct tcctcgggtct acctccagct gacgtcgggtg  
 360  
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 418

<210> 2494  
 <211> 139  
 <212> PRT  
 <213> Homo sapiens

<400> 2494  
 Thr Arg Gln Val Ala Gly Asp Arg Ala Thr Val Thr Ser Met Val Pro  
 1 5 10 15  
 Ser Gly Ala Asp Pro His Thr Tyr Glu Pro Ser Leu Arg Asp Val Arg  
 20 25 30  
 Thr Val Val Tyr Ser Arg Val Ala Leu Ser Asn Tyr Leu Met Leu Glu  
 35 40 45  
 Pro His Ser Val Ile Lys Thr Ile Asp Ser Ser Leu Pro Thr Gly Ser  
 50 55 60  
 Ile Asn Val Ser Leu Ala Glu Glu Ala Gln Lys Tyr Gly Ala Gln Val  
 65 70 75 80  
 Ile Pro Leu Val Glu Asn Ala Asn Leu Asp Thr Val Trp Leu Gly Leu  
 85 90 95  
 Arg Val Ile Gly Lys Gly Ala Arg Arg Gly Ala Asp Arg Ser Ser Ser  
 100 105 110  
 Val Tyr Leu Gln Leu Thr Ser Val Glu Gly Pro Gly Asp Phe Thr Ala  
 115 120 125

Tyr Ile Thr Gly Thr Phe Gly Arg Pro Gln Ile  
 130 135

<210> 2495  
 <211> 1478  
 <212> DNA  
 <213> Homo sapiens

<400> 2495  
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 60  
 agtcctcccg ccaggtcccg cggcccgcac ctgccgcccg cacctgcagc tccgcacctg  
 120  
 cggccagtgc ctactgccct ctcttgccgc ccgcacctgc agccccgcac ctgccgcttg  
 180  
 cacctgcagc cccgcgctct acccggttca agcatggctg accaggcgcc cttcgacacg  
 240  
 gacgtcaaca ccctgacctg cttcgtcatg gaggagggca ggaaggcccg cggcacgggc  
 300  
 gagttgacct agctgctcaa ctgctctgac acagcagtca aagccatctc ttcggcgggtg  
 360  
 cgcaaggcgg gcacgcgca cctctatggc attgctgggt ctaccaacgt gacaggtgat  
 420  
 caagttaaga agctggacgt cctctccaac gacctgggtt tgaacatgtt aaagtcattc  
 480  
 tttgccacgt gtgttctcgt gtcagaagaa gataaacacg ccatcatagt ggaaccggag  
 540  
 aaaaggggta aatatgttgt ctgttttgat ccccttgatg gatcttccaa catcgattgc  
 600  
 cttgtgtccg ttggaacct ttttggcatc tatagaaaga aatcaactga tgagccttct  
 660  
 gagaaggatg ctctgcaacc aggcgggaac ctggtggcag cgggctacgc actgtatggc  
 720  
 agtgccacca tgctggtcct tgccatggac tgtgggggtca actgcttcat gctggacctg  
 780  
 gccatcgggg agttcatttt ggtggacaag gatgtgaaga taaaaaagaa aggtaaaatc  
 840  
 tacagcctta acgagggtta cgccaaggac tttgaccctg ccgtcactga gtacatccag  
 900  
 aggaagaagt tccccccaga taattcagct ccttatgggg ccggtatgt gggctccatg  
 960  
 gtggctgatg ttcacgcac tctggtctac ggaggatat ttctgtacct cgctaacaag  
 1020  
 aagagcccca atggaaagct gagactgctg tacgaatgca acccatggc ctacgtcatg  
 1080  
 gagaaggctg ggggaatggc caccactggg aaggaggccg tgtagacgt cattcccaca  
 1140  
 gacattcacc agaggcgcc ggtgatcttg ggggtccccc acgacgtgct cgagttcctg  
 1200  
 aaggtgtatg agaagcactc tgcccagtga gcacctgccc tgctgcac cggagaattg  
 1260  
 cctctacctg gaccttttgt ctacacagc agtaccctga cctgctgtgc accttacatt  
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<210> 2496
<211> 338
<212> PRT
<213> Homo sapiens
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1793



Ala Gln

325 330 335

<210> 2497  
 <211> 399  
 <212> DNA  
 <213> Homo sapiens

<400> 2497  
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 120  
 atcctgtcag cgcgtggcct ggaccacata ctggaacgga tgcgcaccct ggagtatcag  
 180  
 atggcgaaacg gttccgagga cgaccgtgcc gttgcgatgg acaaatacgc gaaggctgaa  
 240  
 gaccgtctcg tcgcggcccg tggtatggc gcctctgcag aggcagcccg aatcgcgtcg  
 300  
 aacttggggc ttgacgaccg cgtcctttcc cagccgttga aaaacctctc ggggtggtcag  
 360  
 cgtcgtcgcg tcgagctggc gcgcacctc ttttccgga  
 399

<210> 2498  
 <211> 133  
 <212> PRT  
 <213> Homo sapiens

<400> 2498  
 Thr Arg Val Leu Ala Gly Glu Thr Leu Pro Ala Ala Gly Ser Val Arg  
 1 5 10 15  
 Arg Thr Gly Glu Leu Gly Tyr Leu Pro Gln Asp Pro Arg Asp Pro Asp  
 20 25 30  
 Met Glu Met Ile Ala Arg Ala Arg Ile Leu Ser Ala Arg Gly Leu Asp  
 35 40 45  
 His Ile Leu Glu Arg Met Arg Thr Leu Glu Tyr Gln Met Ala Asn Gly  
 50 55 60  
 Ser Glu Asp Asp Arg Ala Val Ala Met Asp Lys Tyr Ala Lys Ala Glu  
 65 70 75 80  
 Asp Arg Leu Val Ala Ala Gly Gly Tyr Gly Ala Ser Ala Glu Ala Ala  
 85 90 95  
 Arg Ile Ala Ser Asn Leu Gly Leu Asp Asp Arg Val Leu Ser Gln Pro  
 100 105 110  
 Leu Lys Asn Leu Ser Gly Gly Gln Arg Arg Arg Val Glu Leu Ala Arg  
 115 120 125  
 Ile Leu Phe Ser Gly  
 130

<210> 2499  
 <211> 348  
 <212> DNA  
 <213> Homo sapiens

&lt;400&gt; 2499

nggccgggcg aagacccggtt ctatatggcc taccacgaca ccgagtgggg cgtgccggaa  
 60  
 tatgacgacc gcgcattgta cgagaagctc attctcgacg gattccaggc cggcctgtcg  
 120  
 tggatcacca tcttgcgcaa gcgcgacaac tttcgcaaag ccttcgacga tttccagccc  
 180  
 gagaagatag cgcgttacaa tgagaagaag gttcacgcgc tgatgaacga tgccggcatc  
 240  
 gtgcgcaacc gcgccaagat cgaaggcacg atcgccagcg cgaaggcgta tctcgacatc  
 300  
 atggaaaaag gcccgggctt ctccaggctg ctgtgggact tcgtcgac  
 348

&lt;210&gt; 2500

&lt;211&gt; 116

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2500

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Pro | Gly | Glu | Asp | Pro | Phe | Tyr | Met | Ala | Tyr | His | Asp | Thr | Glu | Trp |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Gly | Val | Pro | Glu | Tyr | Asp | Asp | Arg | Ala | Leu | Tyr | Glu | Lys | Leu | Ile | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Asp | Gly | Phe | Gln | Ala | Gly | Leu | Ser | Trp | Ile | Thr | Ile | Leu | Arg | Lys | Arg |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |
| Asp | Asn | Phe | Arg | Lys | Ala | Phe | Asp | Asp | Phe | Gln | Pro | Glu | Lys | Ile | Ala |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Arg | Tyr | Asn | Glu | Lys | Lys | Val | His | Ala | Leu | Met | Asn | Asp | Ala | Gly | Ile |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |
| Val | Arg | Asn | Arg | Ala | Lys | Ile | Glu | Gly | Thr | Ile | Ala | Ser | Ala | Lys | Ala |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Tyr | Leu | Asp | Ile | Met | Glu | Lys | Gly | Pro | Gly | Phe | Ser | Arg | Leu | Leu | Trp |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     |     | 110 |     |
| Asp | Phe | Val | Asp |     |     |     |     |     |     |     |     |     |     |     |     |
|     |     |     | 115 |     |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 2501

&lt;211&gt; 569

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2501

gaattcgatt catttgtggc aaatgcttac aatttgatga ttgtaaccca tcaaatacaca  
 60  
 taatgcccat taagccactc catacacttc tttaaatagg aaaatatatg taaagtacgt  
 120  
 acttagcaca gggcctgacc tatagtaatg gtcaagaatg atagcggggg tgaggatatgg  
 180  
 ctttcaagag tcaaacaatt ttactggtgc atcatttcca tttattcttt ctcttttgca  
 240  
 taataaaaacc actcttaaga ttctaccttg gtttagttaga gacaacagtt ctctggaaaag  
 300

tagattctat agcttcaact ccctgaagag atgtgtgcta atttacatca aaaaaatcct  
 360  
 taagggtata aaatatgccca agaactgtca acatcacaga ttaccactgg tagcttctgg  
 420  
 tatattgtta agtttccact taatttttaa gggacactag agaattagta tgactcacct  
 480  
 acactaagtt tatatactgt atttaacagt gtaattttca aatatgacag gaataacca  
 540  
 gatgtgaaat gctgaatcat taatcacag  
 569

<210> 2502  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 2502  
 Met Ile Ala Gly Val Arg Tyr Gly Phe Gln Glu Ser Asn Asn Phe Thr  
 1 5 10 15  
 Gly Ala Ser Phe Pro Phe Ile Leu Ser Leu Leu His Asn Lys Thr Thr  
 20 25 30  
 Leu Lys Ile Leu Pro Trp Leu Val Arg Asp Asn Ser Ser Leu Glu Ser  
 35 40 45  
 Arg Phe Tyr Ser Phe Asn Ser Leu Lys Arg Cys Val Leu Ile Tyr Ile  
 50 55 60  
 Lys Lys Ile Leu Lys Gly Ile Lys Tyr Ala Lys Asn Cys Gln His His  
 65 70 75 80  
 Arg Leu Pro Leu Val Ala Ser Gly Ile Leu Leu Ser Phe His Leu Ile  
 85 90 95  
 Phe Lys Gly His  
 100

<210> 2503  
 <211> 419  
 <212> DNA  
 <213> Homo sapiens

<400> 2503  
 gccacgccag ccactaccc ttctctcgac tcgccaaata agtattcact gaacatgtac  
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 aaggccttgc tacctcagca gtctacagc ttggcccagc cgctgtattc tccagtctgc  
 120  
 accaatgggg agcgtttct ctacctgccg ccacctcact acgtcggtcc ccacatccca  
 180  
 tcgtccttgg catcacccat gaggtctctg acaccttcgg cctccccagc catccgcct  
 240  
 ctcgtccatt gcgcagacaa aagcctcccg tggaagatgg gcgtcagccc tgggaatcct  
 300  
 gttgattccc acgcctatcc tcacatccag aacagtaagc agcccagggt tccctctgcc  
 360  
 aaggcgggtca ccagtggcct gccgggggac acagctctcc tgttgcccc ctcacgcgt  
 419

<210> 2504

<211> 121  
 <212> PRT  
 <213> Homo sapiens

<400> 2504  
 Met Tyr Lys Ala Leu Leu Pro Gln Gln Ser Tyr Ser Leu Ala Gln Pro  
 1 5 10 15  
 Leu Tyr Ser Pro Val Cys Thr Asn Gly Glu Arg Phe Leu Tyr Leu Pro  
 20 25 30  
 Pro Pro His Tyr Val Gly Pro His Ile Pro Ser Ser Leu Ala Ser Pro  
 35 40 45  
 Met Arg Leu Ser Thr Pro Ser Ala Ser Pro Ala Ile Pro Pro Leu Val  
 50 55 60  
 His Cys Ala Asp Lys Ser Leu Pro Trp Lys Met Gly Val Ser Pro Gly  
 65 70 75 80  
 Asn Pro Val Asp Ser His Ala Tyr Pro His Ile Gln Asn Ser Lys Gln  
 85 90 95  
 Pro Arg Val Pro Ser Ala Lys Ala Val Thr Ser Gly Leu Pro Gly Asp  
 100 105 110  
 Thr Ala Leu Leu Pro Pro Ser Arg  
 115 120

<210> 2505  
 <211> 540  
 <212> DNA  
 <213> Homo sapiens

<400> 2505  
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 ccgctcgtgt tgggtgccgtt ggctcgggtc accggcgatc ggcgtctgat gggccaatgg  
 120  
 acgaatgggc gtgtcatggc cgccatcgcg tggatcgctg tggcagcagt ctcggtcttc  
 180  
 aacgtgggttc tcgtcgtcga gacgggtcatg ggtgcatgat ccttgagggc agttttctgg  
 240  
 cgacaatcgt gaaaatgagt gacaaactca agcgggtgac gacgccgaac cccgcaccga  
 300  
 cctctgcccc cgagctagcc aacgatttgg ccaactgcatt tcgcgggtac cctgctggag  
 360  
 tggcgatcct cacgacgatg ggagcggctg ggcccagagg cttgacggtc tcctccctgg  
 420  
 cgtcgggtgc agtcgtcccg gctgttgtgt cggtgtcggt gggtaatggt tcgacgaccc  
 480  
 tggccaccct gacggaggag tcccgcgtca tcgtccacat gcttgatgca gatcgcgcg  
 540

<210> 2506  
 <211> 72  
 <212> PRT  
 <213> Homo sapiens

<400> 2506  
 Ser Gly Ala Asn Pro Thr Gln Ala Leu Val Trp Ser Gln Val Leu Leu

|   |    |    |    |
|---|----|----|----|
| 1   | 5  | 10 | 15 |
| Ser Met Gly Leu Pro Leu Val Leu Val Pro Leu Ala Arg Phe Thr Gly |    |    |    |
|   | 20 | 25 | 30 |
| Asp Arg Arg Leu Met Gly Gln Trp Thr Asn Gly Arg Val Met Ala Ala |    |    |    |
|   | 35 | 40 | 45 |
| Ile Ala Trp Ile Val Val Ala Ala Val Ser Ala Leu Asn Val Val Leu |    |    |    |
|   | 50 | 55 | 60 |
| Val Val Glu Thr Val Met Gly Ala                                 |    |    |    |
| 65  | 70 |    |    |

&lt;210&gt; 2507

&lt;211&gt; 922

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2507

nacgcgtgaa gggcagagga gagagaccag tgaaggggga ggaggcggcc aaaaggagac  
 60  
 agcttcatgc ccccaggaca taaatagccc ggctgctgca ggtacctgaa ggagttcagg  
 120  
 acggagcagt gccccctgtt ttcacagcac aagtgcgcgc agcaccggcc gttcacctgc  
 180  
 ttccactggc acttcctcaa ccagcggcgc cgcaggcccc tccgcaggcg cgacggcacc  
 240  
 ttcaactaca gccccgacgt gtactgctcc aagtacaacg aagccaccgg cgtgtgcccc  
 300  
 gacggcgacg agtgtcccta cctgcaccgg acgacggggg acacagaacg caagtaccac  
 360  
 ctgcgttact aaaaaacagg aacctgcac cagagacag acgcacgtgg ccaactgcgtg  
 420  
 aagaatgggc tgcactgtgc cttcgcgcac gggcccatg acctccgctc ccctgtctac  
 480  
 gacatcaggg agcttcaggc catggaggcc ttgcagaatg gccagaccac ggtagagggg  
 540  
 agcatagagg gccagtcggc tggggctgcg agccatgcca tgatagaaaa gatcctcagc  
 600  
 gaggagcctc ggtggcaaga gactgcttat gtgctgggga actataagac ggagccttgc  
 660  
 aagaagcccc cgcggtgtg ccgccaaggc tatgcctgtc cctactacca caacagcaag  
 720  
 gaccggcggc ggagcccccg gaagcacaaa tacaggctcg ctccatgtcc aaacgtcaag  
 780  
 cacgggggatg agtggggaga ccctggcaag tgtgagaacg gagacgcctg ccagtactgc  
 840  
 cacacccgca ccgagcagca gttccacccc gagatctaca agtccacca gtgcaacgga  
 900  
 aggggggggg gggtagaggga gg  
 922

&lt;210&gt; 2508

&lt;211&gt; 278

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2508

Pro Gly Cys Cys Arg Tyr Leu Lys Glu Phe Arg Thr Glu Gln Cys Pro  
 1 5 10 15  
 Leu Phe Ser Gln His Lys Cys Ala Gln His Arg Pro Phe Thr Cys Phe  
 20 25 30  
 His Trp His Phe Leu Asn Gln Arg Arg Arg Pro Leu Arg Arg Arg  
 35 40 45  
 Asp Gly Thr Phe Asn Tyr Ser Pro Asp Val Tyr Cys Ser Lys Tyr Asn  
 50 55 60  
 Glu Ala Thr Gly Val Cys Pro Asp Gly Asp Glu Cys Pro Tyr Leu His  
 65 70 75 80  
 Arg Thr Thr Gly Asp Thr Glu Arg Lys Tyr His Leu Arg Tyr Tyr Lys  
 85 90 95  
 Thr Gly Thr Cys Ile His Glu Thr Asp Ala Arg Gly His Cys Val Lys  
 100 105 110  
 Asn Gly Leu His Cys Ala Phe Ala His Gly Pro His Asp Leu Arg Ser  
 115 120 125  
 Pro Val Tyr Asp Ile Arg Glu Leu Gln Ala Met Glu Ala Leu Gln Asn  
 130 135 140  
 Gly Gln Thr Thr Val Glu Gly Ser Ile Glu Gly Gln Ser Ala Gly Ala  
 145 150 155 160  
 Ala Ser His Ala Met Ile Glu Lys Ile Leu Ser Glu Glu Pro Arg Trp  
 165 170 175  
 Gln Glu Thr Ala Tyr Val Leu Gly Asn Tyr Lys Thr Glu Pro Cys Lys  
 180 185 190  
 Lys Pro Pro Arg Leu Cys Arg Gln Gly Tyr Ala Cys Pro Tyr Tyr His  
 195 200 205  
 Asn Ser Lys Asp Arg Arg Arg Ser Pro Arg Lys His Lys Tyr Arg Ser  
 210 215 220  
 Ser Pro Cys Pro Asn Val Lys His Gly Asp Glu Trp Gly Asp Pro Gly  
 225 230 235 240  
 Lys Cys Glu Asn Gly Asp Ala Cys Gln Tyr Cys His Thr Arg Thr Glu  
 245 250 255  
 Gln Gln Phe His Pro Glu Ile Tyr Lys Ser Thr Lys Cys Asn Gly Arg  
 260 265 270  
 Gly Gly Gly Val Arg Glu  
 275

&lt;210&gt; 2509

&lt;211&gt; 348

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2509

gccggccttg acctgggccc ggcatggct ccacggcaag gtccaataact ccgtgcgctt  
 60  
 gtggcgctgg acttcgtcga tgcccgcgag gttttgctgc ccgcgaccat tggactggac  
 120  
 gttcatgaac ggggtggagcc cggcaaaacc gaaactcaac caatccttgg ggatgctgga  
 180  
 cggcaggttg ccgagggcaa acacgttgac cacgttcgca ccgacaccac cgaccacggc  
 240  
 caccgctccc agcggaaatct cgtagactta ggcgcagggt tggtaaggcg tgtagcggtc  
 300

gtaacgacgg gtgacctcga actcggggct tcaaagtctt ctgctgtg  
348

<210> 2510

<211> 108

<212> PRT

<213> Homo sapiens

<400> 2510

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Pro | Arg | Gln | Gly | Pro | Ile | Leu | Arg | Ala | Leu | Val | Ala | Leu | Asp |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Phe | Val | Asp | Ala | Arg | Glu | Val | Leu | Leu | Pro | Ala | Thr | Ile | Gly | Leu | Asp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Val | His | Glu | Arg | Val | Glu | Pro | Gly | Lys | Thr | Glu | Thr | Gln | Pro | Ile | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Gly | Asp | Ala | Gly | Arg | Gln | Val | Ala | Glu | Gly | Lys | His | Val | Asp | His | Val |
|     | 50  |     |     |     | 55  |     |     |     |     |     | 60  |     |     |     |     |
| Arg | Thr | Asp | Thr | Thr | Asp | His | Gly | His | Arg | Ser | Gln | Arg | Asn | Leu | Val |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Asp | Leu | Ala | Pro | Gly | Leu | Val | Arg | Arg | Val | Ala | Val | Val | Thr | Thr | Gly |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Asp | Leu | Glu | Leu | Gly | Ala | Ser | Lys | Ser | Ser | Ala | Val |     |     |     |     |
|     |     |     | 100 |     |     |     |     |     | 105 |     |     |     |     |     |     |

<210> 2511

<211> 663

<212> DNA

<213> Homo sapiens

<400> 2511

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120  
cctgtcatcg cacacgtcgg ttatccgcag gccgccgacg agtattacca gttgctttta  
180  
gcattacgcc caggacgcgt tgctggcctg gccgagatcg tcgtcaacgg tcaacctttt  
240  
accgtcactg acgccactga ggatgaacta gctctcactg cttgggctcg taccctctc  
300  
gagggaactc ccatcgccat ggatggatcg tggcagctgc atcgccgctg agcggcccct  
360  
gagccagttc ggttcgctaa gcgcttcggt ggtgagcaat cgaacacctc gatcatggtg  
420  
ggcgacgcca tcatcatcaa aatgttccgc cgcctggagc ccggcgacaa ccttgacatc  
480  
accgtgcata gcgccctcaa cgatgccggg atctcatcgg tggccacatt gtacggcttt  
540  
atgtccggac agatccccgc tgaggaacac atcccggctg atctagctat gatcattgag  
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660  
gac  
663

<210> 2512  
 <211> 221  
 <212> PRT  
 <213> Homo sapiens

<400> 2512  
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 Gly Arg Gly Gly Ser Leu Thr Arg Leu Leu Ser Leu Ala Pro Val Val  
 20 25 30  
 Asn Glu Gln Asp Leu Gln Val Leu Pro Val Ile Ala His Val Gly Tyr  
 35 40 45  
 Pro Gln Ala Ala Asp Glu Tyr Tyr Gln Leu Leu Leu Ala Leu Arg Pro  
 50 55 60  
 Gly Arg Val Ala Gly Leu Ala Glu Ile Val Val Asn Gly Gln Pro Phe  
 65 70 75 80  
 Thr Val Thr Asp Ala Thr Glu Asp Glu Leu Ala Leu Thr Ala Trp Ala  
 85 90 95  
 Arg Ile Leu Leu Glu Gly Thr Pro Ile Ala Met Asp Gly Ser Trp Gln  
 100 105 110  
 Leu His Arg Arg Arg Ala Ala Pro Glu Pro Val Arg Phe Ala Lys Arg  
 115 120 125  
 Phe Gly Gly Glu Gln Ser Asn Thr Ser Ile Met Val Gly Asp Ala Ile  
 130 135 140  
 Ile Ile Lys Met Phe Arg Arg Leu Glu Pro Gly Asp Asn Leu Asp Ile  
 145 150 155 160  
 Thr Val His Ser Ala Leu Asn Asp Ala Gly Ile Ser Ser Val Ala Thr  
 165 170 175  
 Leu Tyr Gly Phe Met Ser Gly Gln Ile Pro Ala Glu Glu His Ile Pro  
 180 185 190  
 Val Asp Leu Ala Met Ile Ile Glu Arg Leu Pro Gln Pro Arg Asp Gly  
 195 200 205  
 Trp Glu Leu Ile Thr Ala Lys Ala Val Asp Leu Val Asp  
 210 215 220

<210> 2513  
 <211> 368  
 <212> DNA  
 <213> Homo sapiens

<400> 2513  
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 120  
 gacctgaagt tctgcatgga tggagttcag actgctttga ggagtgaaga ttatgagcag  
 180  
 gctgcagcac atattcatcg ctacttgtgc ctggacaagt cggtcattga gctcagccga  
 240  
 cagggcaaag agggtcagca tccgaaactg gagcatgatt gatgccaacc tgaattgtct  
 300  
 gcaggaagct gagcaacgtc tcaaagccat tgtggcagag aagtttgcca ttgccaccaa  
 360



ggaagggtg  
368

<210> 2514  
<211> 93  
<212> PRT  
<213> Homo sapiens

<400> 2514  
Leu Ala Gly Met Ile Thr Phe Thr Cys Asn Leu Ala Glu Asn Val Ser  
1 5 10 15  
Ser Lys Val Arg Gln Leu Asp Leu Ala Lys Asn Arg Leu Tyr Gln Ala  
20 25 30  
Ile Gln Arg Ala Asp Asp Ile Leu Asp Leu Lys Phe Cys Met Asp Gly  
35 40 45  
Val Gln Thr Ala Leu Arg Ser Glu Asp Tyr Glu Gln Ala Ala Ala His  
50 55 60  
Ile His Arg Tyr Leu Cys Leu Asp Lys Ser Val Ile Glu Leu Ser Arg  
65 70 75 80  
Gln Gly Lys Glu Gly Gln His Pro Lys Leu Glu His Asp  
85 90

<210> 2515  
<211> 351  
<212> DNA  
<213> Homo sapiens

<400> 2515  
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gtctcatcctg gaccagaccc ttctacccc tccaactccc caacaactgg gcaattggaa  
120  
tatcagtcca tccctaaaag ccaaccaggc tctcccgagg gaggcaggaa atccctgctc  
180  
cctccatccc ccaccgggaa tgctgcaggg ggcttgaggg aggcgacaca gtggggagct  
240  
ctgggtgcag gtgggcagac aatgggcca caccacct cagccccgct ccagtatcag  
300  
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351

<210> 2516  
<211> 98  
<212> PRT  
<213> Homo sapiens

<400> 2516  
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Thr Gly Gln Leu Glu Tyr Gln Ser Ile Pro Lys Ser Gln Pro Gly Ser  
20 25 30  
Pro Glu Gly Gly Arg Lys Ser Leu Leu Pro Pro Ser Pro Thr Gly Asn  
35 40 45  
Ala Ala Gly Gly Leu Arg Glu Ala Thr Gln Trp Gly Ala Leu Gly Ala

50                      55                      60  
 Gly Gly Gln Thr Met Gly Gln His Thr Pro Ser Ala Pro Leu Gln Tyr  
 65                      70                      75                      80  
 Gln His Ser Arg Pro Thr His Leu Gly Pro Trp Ser Pro Gly Asp Leu  
                     85                      90                      95  
 Thr Arg

<210> 2517  
 <211> 356  
 <212> DNA  
 <213> Homo sapiens

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 120  
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 180  
 agggcacaca ttccctgggg actgagctcc aaggtgctgg gtccctgagc aggaagcggc  
 240  
 cagtgttgag tgggcagtgt ctcactccag cccctccttc ccaggccagt tcttctcatc  
 300  
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 356

<210> 2518  
 <211> 103  
 <212> PRT  
 <213> Homo sapiens

<400> 2518  
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 1                      5                      10                      15  
 Ala Gly Gly Gly Ala Arg Ala Ser Pro Gly Val Arg Thr Cys His Gln  
                     20                      25                      30  
 Pro Asn Pro Met Gly Leu Phe Ser Ser Pro Asn Leu Ala Gly Leu Ala  
                     35                      40                      45  
 Glu Ala Thr His Ser Leu Gly Thr Glu Leu Gln Gly Ala Gly Ser Leu  
                     50                      55                      60  
 Ser Arg Lys Arg Pro Val Leu Ser Gly Gln Cys Leu Thr Pro Ala Pro  
 65                      70                      75                      80  
 Pro Ser Gln Ala Ser Ser Ser His Leu Pro Gln Ser Phe Pro Ser Arg  
                     85                      90                      95  
 Pro Ser Ser Thr Gly Gln Thr  
                     100

<210> 2519  
 <211> 830  
 <212> DNA  
 <213> Homo sapiens

<400> 2519

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 cgacagccct ggtgccaaagc cctgtctgag ccccaccagg aggaagcgcg tgctggctgc  
 120  
 tctccatctg ctctgggact ctggcctgct gcttcctctg cctgccactc cccaaccccg  
 180  
 tttctcctc tgaaaactgg agctacacct gcccacacag ggcagaatta ccttaaatgg  
 240  
 cacaagacaa ttgcacagca gacccacctc ttctccaaag ttttcagggc ccaaaccag  
 300  
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 360  
 ttctgcctc tgcttttgct caatctgctc aatgacagaa acgcgacaac agagggcact  
 420  
 ttctccaaac ccagctctcc ctgaggctc ccatcctgct gctcacgctg aggccactct  
 480  
 accctgcctt ccgcagctca caggcagacc tggagcccag tgactacagg gttggcctcc  
 540  
 tcatcttgcc accactcaca atgcccagca gtgttaaaat ccggcaggat gcaccgctt  
 600  
 gggaagcagt ccccaaagca gaatcgctac cacatctgaa tagtttctgc catcccactg  
 660  
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 780  
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 830

&lt;210&gt; 2520

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2520

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | Pro | Ala | Arg | Arg | Cys | Leu | Gly | Leu | Gly | Pro | Glu | Asn | Phe | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Glu | Glu | Val | Gly | Leu | Leu | Cys | Asn | Cys | Leu | Val | Pro | Phe | Lys | Val | Ile |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Leu | Pro | Cys | Trp | Gly | Arg | Cys | Ser | Ser | Ser | Phe | Gln | Arg | Arg | Lys | Arg |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Gly | Trp | Gly | Val | Ala | Gly | Arg | Gly | Ser | Ser | Arg | Pro | Glu | Ser | Gln | Ser |
|     |     | 50  |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Arg | Trp | Arg | Ala | Ala | Ser | Thr | Arg | Phe | Leu | Leu | Val | Gly | Leu | Arg | Gln |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |
| Gly | Leu | Ala | Pro | Gly | Leu | Ser | Gly | Lys | Arg | Glu | Glu | Glu | Leu | Arg | Leu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Arg | Gly | Ala | Val | Leu | Pro | Arg | Arg | Leu | Thr | Gly |     |     |     |     |     |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     |     |     |     |

&lt;210&gt; 2521

&lt;211&gt; 4291

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2521

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ccaggctgta gccgcaggac cccaccaccc cccatggctc ccctggcctt ggtgggggtc  
120  
acactectcc tggcggtcc cccatgctcc ggggcagcca cccaacccc ctccctgccg  
180  
cctcccccg ccaatgacag cgacaccagc acagggggct gccaggggtc ctaccgctgc  
240  
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360  
gccgaccgtt tcatggcggc catcgaggtc atcacgtcaa aagagaagga gatcaccatc  
420  
accaaggcca acggtgagac cagcggtggc accgttcgca tctggaatga gacgggtgtcc  
480  
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540  
gtctgcggcc acaacttcca ggggggtgag ctggggccag gcaccatcgt gggcagcgct  
600  
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660  
cgcaagatca agcacctgag agtcttcttt gtactgcct cttggagcat cttcgctat  
720  
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1320  
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1980  
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2160  
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 4291

&lt;210&gt; 2522

&lt;211&gt; 952

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2522

Leu Ser Leu Phe Arg Ala Glu Ser Pro Thr Thr Ala Ser Pro Ala Leu  
 1 5 10 15  
 Gly Gly Pro Ala Pro Gly Cys Ser Arg Arg Thr Pro Pro Pro Pro Met  
 20 25 30  
 Ala Pro Leu Ala Leu Val Gly Val Thr Leu Leu Leu Ala Ala Pro Pro  
 35 40 45  
 Cys Ser Gly Ala Ala Thr Pro Thr Pro Ser Leu Pro Pro Pro Pro Ala  
 50 55 60  
 Asn Asp Ser Asp Thr Ser Thr Gly Gly Cys Gln Gly Ser Tyr Arg Cys

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |
| Gln | Pro | Gly | Val | Leu | Leu | Pro | Val | Trp | Glu | Pro | Asp | Asp | Pro | Ser |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |
| Gly | Asp | Lys | Ala | Ala | Arg | Ala | Val | Val | Tyr | Phe | Val | Ala | Met | Val |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |
| Met | Phe | Leu | Gly | Val | Ser | Ile | Ile | Ala | Asp | Arg | Phe | Met | Ala | Ala |
|     |     | 115 |     |     |     | 120 |     |     |     |     |     | 125 |     |     |
| Glu | Val | Ile | Thr | Ser | Lys | Glu | Lys | Glu | Ile | Thr | Ile | Thr | Lys | Ala |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     | Asn |
| Gly | Glu | Thr | Ser | Val | Gly | Thr | Val | Arg | Ile | Trp | Asn | Glu | Thr | Val |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |
| Asn | Leu | Thr | Leu | Met | Ala | Leu | Gly | Ser | Ser | Ala | Pro | Glu | Ile | Leu |
|     |     |     |     | 165 |     |     |     | 170 |     |     |     |     |     | 175 |
| Ser | Val | Ile | Glu | Val | Cys | Gly | His | Asn | Phe | Gln | Ala | Gly | Glu | Leu |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 | Gly |
| Pro | Gly | Thr | Ile | Val | Gly | Ser | Ala | Ala | Phe | Asn | Met | Phe | Val | Val |
|     | 195 |     |     |     |     | 200 |     |     |     |     |     | 205 |     | Ile |
| Ala | Val | Cys | Ile | Tyr | Val | Ile | Pro | Ala | Gly | Glu | Ser | Arg | Lys | Ile |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     | Lys |
| His | Leu | Arg | Val | Phe | Phe | Val | Thr | Ala | Ser | Trp | Ser | Ile | Phe | Ala |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     | 240 |
| Val | Trp | Leu | Tyr | Leu | Ile | Leu | Ala | Val | Phe | Ser | Pro | Gly | Val | Val |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |
| Val | Trp | Glu | Ala | Leu | Leu | Thr | Leu | Val | Phe | Phe | Pro | Val | Cys | Val |
|     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |     | Val |
| Phe | Ala | Trp | Met | Ala | Asp | Lys | Arg | Leu | Leu | Phe | Tyr | Lys | Tyr | Val |
|     | 275 |     |     |     |     | 280 |     |     |     |     |     | 285 |     | Tyr |
| Lys | Arg | Tyr | Arg | Thr | Asp | Pro | Arg | Ser | Gly | Ile | Ile | Ile | Gly | Ala |
|     | 290 |     |     |     |     | 295 |     |     |     |     | 300 |     |     | Glu |
| Gly | Asp | Pro | Pro | Lys | Ser | Ile | Glu | Leu | Asp | Gly | Thr | Phe | Val | Gly |
| 305 |     |     |     | 310 |     |     |     |     |     | 315 |     |     |     | 320 |
| Glu | Ala | Pro | Gly | Glu | Leu | Gly | Gly | Leu | Gly | Pro | Gly | Pro | Ala | Glu |
|     |     |     | 325 |     |     |     |     |     | 330 |     |     |     |     | 335 |
| Arg | Glu | Leu | Asp | Ala | Ser | Arg | Arg | Glu | Val | Ile | Gln | Ile | Leu | Lys |
|     |     | 340 |     |     |     |     |     | 345 |     |     |     |     | 350 | Asp |
| Leu | Lys | Gln | Lys | His | Pro | Asp | Lys | Asp | Leu | Glu | Gln | Leu | Val | Gly |
|     | 355 |     |     |     |     | 360 |     |     |     |     | 365 |     |     | Ile |
| Ala | Asn | Tyr | Tyr | Ala | Leu | Leu | His | Gln | Gln | Lys | Ser | Arg | Ala | Phe |
|     | 370 |     |     |     | 375 |     |     |     |     |     | 380 |     |     | Tyr |
| Arg | Ile | Gln | Ala | Thr | Arg | Leu | Met | Thr | Gly | Ala | Gly | Asn | Val | Leu |
| 385 |     |     |     | 390 |     |     |     |     |     | 395 |     |     |     | 400 |
| Arg | His | Ala | Ala | Asp | Ala | Ser | Arg | Arg | Ala | Ala | Pro | Ala | Glu | Gly |
|     |     |     | 405 |     |     |     |     |     | 410 |     |     |     |     | 415 |
| Gly | Glu | Asp | Glu | Asp | Asp | Gly | Ala | Ser | Arg | Ile | Phe | Phe | Glu | Pro |
|     |     | 420 |     |     |     |     |     | 425 |     |     |     |     | 430 | Ser |
| Leu | Tyr | His | Cys | Leu | Glu | Asn | Cys | Gly | Ser | Val | Leu | Leu | Ser | Val |
|     | 435 |     |     |     |     | 440 |     |     |     |     | 445 |     |     | Thr |
| Cys | Gln | Gly | Gly | Glu | Gly | Asn | Ser | Thr | Phe | Tyr | Val | Asp | Tyr | Arg |
|     | 450 |     |     |     |     | 455 |     |     |     | 460 |     |     |     | Thr |
| Glu | Asp | Gly | Ser | Ala | Lys | Ala | Gly | Ser | Asp | Tyr | Glu | Tyr | Ser | Glu |
| 465 |     |     |     | 470 |     |     |     |     |     | 475 |     |     |     | 480 |
| Thr | Leu | Val | Phe | Lys | Pro | Gly | Glu | Thr | Gln | Lys | Glu | Leu | Arg | Ile |
|     |     |     |     | 485 |     |     |     |     | 490 |     |     |     |     | 495 |
| Ile | Ile | Asp | Asp | Asp | Ile | Phe | Glu | Glu | Asp | Glu | His | Phe | Phe | Val |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     | Arg |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|-----|--|--|--|--|--|--|--|--|--|--|
| 500 |     |     |     |     |     |     |     |     |     | 505 |     |     |     |     |     |  |  |  |  | 510 |  |  |  |  |  |  |  |  |  |  |
| Leu | Leu | Asn | Leu | Arg | Val | Gly | Asp | Ala | Gln | Gly | Met | Phe | Glu | Pro | Asp |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
|     |     | 515 |     |     |     |     |     | 520 |     |     |     |     | 525 |     |     |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
| Gly | Gly | Gly | Arg | Pro | Lys | Gly | Arg | Leu | Val | Ala | Pro | Leu | Leu | Ala | Thr |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
|     |     | 530 |     |     |     |     |     | 535 |     |     |     |     | 540 |     |     |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
| Val | Thr | Ile | Leu | Asp | Asp | Asp | His | Ala | Gly | Ile | Phe | Ser | Phe | Gln | Asp |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
|     |     | 545 |     |     |     |     |     | 550 |     |     |     |     | 555 |     |     |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
| Arg | Leu | Leu | His | Val | Ser | Glu | Cys | Met | Gly | Thr | Val | Asp | Val | Arg | Val |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
| Val | Arg | Ser | Ser | Gly | Ala | Arg | Gly | Thr | Val | Arg | Leu | Pro | Tyr | Arg | Thr |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
| Val | Asp | Gly | Thr | Ala | Arg | Gly | Gly | Gly | Val | His | Tyr | Glu | Asp | Ala | Cys |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
| Gly | Glu | Leu | Glu | Phe | Gly | Asp | Asp | Glu | Thr | Met | Lys | Thr | Leu | Gln | Val |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
| Lys | Ile | Val | Asp | Asp | Glu | Glu | Tyr | Glu | Lys | Lys | Asp | Asn | Phe | Phe | Ile |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
| Glu | Leu | Gly | Gln | Pro | Gln | Trp | Leu | Lys | Arg | Gly | Ile | Ser | Ala | Leu | Leu |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
| Leu | Asn | Gln | Gly | Asp | Gly | Asp | Arg | Lys | Leu | Thr | Ala | Glu | Glu | Glu | Glu |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
| Ala | Arg | Arg | Ile | Ala | Glu | Met | Gly | Lys | Pro | Val | Leu | Gly | Glu | Asn | Cys |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
| Arg | Leu | Glu | Val | Ile | Ile | Glu | Glu | Ser | Tyr | Asp | Phe | Lys | Asn | Thr | Val |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
| Asp | Lys | Leu | Ile | Lys | Lys | Thr | Asn | Leu | Ala | Leu | Val | Ile | Gly | Thr | His |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
| Ser | Trp | Arg | Glu | Gln | Phe | Leu | Glu | Ala | Ile | Thr | Val | Ser | Ala | Gly | Asp |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
| Glu | Glu | Glu | Glu | Glu | Asp | Gly | Ser | Arg | Glu | Glu | Arg | Leu | Pro | Ser | Cys |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
| Phe | Asp | Tyr | Val | Met | His | Phe | Leu | Thr | Val | Phe | Trp | Lys | Val | Leu | Phe |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
| Ala | Cys | Val | Pro | Pro | Thr | Glu | Tyr | Cys | His | Gly | Trp | Ala | Cys | Phe | Gly |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
| Val | Ser | Ile | Leu | Val | Ile | Gly | Leu | Leu | Thr | Ala | Leu | Ile | Gly | Asp | Leu |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
| Ala | Ser | His | Phe | Gly | Cys | Thr | Val | Gly | Leu | Lys | Asp | Ser | Val | Asn | Ala |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
| Val | Val | Phe | Val | Ala | Leu | Gly | Thr | Ser | Ile | Pro | Asp | Thr | Phe | Ala | Ser |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
| Lys | Val | Ala | Ala | Leu | Gln | Asp | Gln | Cys | Ala | Asp | Ala | Ser | Ile | Gly | Asn |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
| Val | Thr | Gly | Ser | Asn | Ala | Val | Asn | Val | Phe | Leu | Gly | Leu | Gly | Val | Ala |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
| Trp | Ser | Val | Ala | Ala | Val | Tyr | Trp | Ala | Val | Gln | Gly | Arg | Pro | Phe | Glu |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
| Val | Arg | Thr | Gly | Thr | Leu | Ala | Phe | Ser | Val | Thr | Leu | Phe | Thr | Val | Phe |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
| Ala | Phe | Val | Gly | Ile | Ala | Val | Leu | Leu | Tyr | Arg | Arg | Arg | Pro | His | Ile |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
| Gly | Gly | Glu | Leu | Gly | Gly | Pro | Arg | Gly | Pro | Lys | Leu | Ala | Thr | Thr | Ala |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |
| Leu | Phe | Leu | Gly | Leu | Trp | Leu | Leu | Tyr | Ile | Leu | Phe | Ala | Ser | Leu | Glu |  |  |  |  |     |  |  |  |  |  |  |  |  |  |  |



930  
Ala Tyr Cys His Ile Arg Gly Phe  
945 950

940

<210> 2523  
<211> 392  
<212> DNA  
<213> Homo sapiens

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ttcagccgaa aaattgttgg tgttgctaca cgctcgacga tgcgtaccga tgcgctgccc  
120  
atggaggctt tggagcatgc gttaacgact gcagggcgaa ttcattgaaa ccagttaatt  
180  
caccatagcg atcggggcag ccagtacgtg tcaactgaagt attccaccgc gttagcggaa  
240  
tccggaatcc gtccgagtgt gggaacagtc ggcgattctt atgacaatgc tctagccgaa  
300  
acagtcaacg gtctctacaa ggcggaactg attcatgccc aagggtccgtg gacgtcggtc  
360  
ggagaagtcg aattggccac cttgcggnnn nn  
392

<210> 2524  
<211> 130  
<212> PRT  
<213> Homo sapiens

<400> 2524  
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Val Val Asp Val Phe Ser Arg Lys Ile Val Gly Val Ala Thr Arg Ser  
20 25 30  
Thr Met Arg Thr Asp Ala Leu Pro Met Glu Ala Leu Glu His Ala Leu  
35 40 45  
Thr Thr Ala Gly Arg Ile His Gly Asn Gln Leu Ile His His Ser Asp  
50 55 60  
Arg Gly Ser Gln Tyr Val Ser Leu Lys Tyr Ser Thr Ala Leu Ala Glu  
65 70 75 80  
Ser Gly Ile Arg Pro Ser Val Gly Thr Val Gly Asp Ser Tyr Asp Asn  
85 90 95  
Ala Leu Ala Glu Thr Val Asn Gly Leu Tyr Lys Ala Glu Leu Ile His  
100 105 110  
Ala Gln Gly Pro Trp Thr Ser Val Gly Glu Val Glu Leu Ala Thr Leu  
115 120 125  
Arg Xaa  
130

<210> 2525  
<211> 378  
<212> DNA  
<213> Homo sapiens

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 60  
 tcccccttga atacgtgggtg ctgtcaccgc cgcgggaatc aagaaccgca cggtgcgcaa  
 120  
 atcgctgcgc tacgcaccaa cgtggtcggc aagatgttgg tcagcggcga gccccgnaa  
 180  
 tgattcatat ctccgatatc agcacgacag gggcgctcatt ccgctctgca catcggcttg  
 240  
 gaagtcagcg gtgcgcccgc acgcctgcga tttcgggtga agacgcgcga ctaccattca  
 300  
 gaactgggtgg ccgcaacact cattcgcagc gagaagcccc ccgatttgcc caacacctat  
 360  
 caatacggcg tggaattc  
 378

<210> 2526  
 <211> 111  
 <212> PRT  
 <213> Homo sapiens

<400> 2526  
 Met Ala Val Cys Arg Ile Pro Phe Glu Tyr Val Val Leu Ser Pro Pro  
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 Arg Glu Ser Arg Thr Ala Arg Cys Ala Asn Arg Cys Ala Thr His Gln  
 20 25 30  
 Arg Gly Arg Gln Asp Val Gly Gln Arg Arg Ala Pro Xaa Met Ile His  
 35 40 45  
 Ile Ser Asp Ile Ser Thr Thr Gly Ala Ser Phe Arg Ser Ala His Arg  
 50 55 60  
 Leu Gly Ser Gln Arg Cys Ala Arg Thr Pro Ala Ile Ser Gly Glu Asp  
 65 70 75 80  
 Ala Arg Leu Pro Phe Arg Thr Gly Gly Arg Asn Thr His Ser Gln Arg  
 85 90 95  
 Glu Ala Arg Arg Phe Ala Gln His Leu Ser Ile Arg Arg Gly Ile  
 100 105 110

<210> 2527  
 <211> 305  
 <212> DNA  
 <213> Homo sapiens

<400> 2527  
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 cagatccaga gagacgacct tggagccagt cccagagca gcagccagcc agaccacggc  
 120  
 cgctctccc cccagaagc tcccagacagg cccaccatct ccacggcctc cgagacctca  
 180  
 gtgtacgtga cctggattcc ccgtgggaat ggtgggttcc caatccagtc cttccgtgtg  
 240  
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 300

cgcgt  
305

<210> 2528  
<211> 101  
<212> PRT  
<213> Homo sapiens

<400> 2528  
Xaa Val Thr Phe Arg Met Gly Arg Arg Pro Lys Pro Glu Ile Met Ala  
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Ser Lys Glu Gln Gln Ile Gln Arg Asp Asp Leu Gly Ala Ser Pro Gln  
20 25 30  
Ser Ser Ser Gln Pro Asp His Gly Arg Leu Ser Pro Pro Glu Ala Pro  
35 40 45  
Asp Arg Pro Thr Ile Ser Thr Ala Ser Glu Thr Ser Val Tyr Val Thr  
50 55 60  
Trp Ile Pro Arg Gly Asn Gly Gly Phe Pro Ile Gln Ser Phe Arg Val  
65 70 75 80  
Glu Tyr Lys Lys Leu Lys Lys Val Gly Asp Trp Ile Leu Ala Thr Ser  
85 90 95  
Ala Ile Pro Pro Arg  
100

<210> 2529  
<211> 387  
<212> DNA  
<213> Homo sapiens

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120  
gtgaagtgtc acccggcttg ctgcccgtg tctccgccgt aacacgtgta taccggctca  
180  
gccatggcgg cggctgctgg gaaggctcct gcgtatggct ttgccatccg ggaccggggc  
240  
tttgcctcgc aggggtgggc ttctgagcag aggaaggcca gaggtaacca ggtccatgca  
300  
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360  
ccatgagctc cacagggtcc tgaggga  
387

<210> 2530  
<211> 121  
<212> PRT  
<213> Homo sapiens

<400> 2530  
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1 5 10 15  
Trp Lys Asp Thr Asn Val His Gly Pro Gly Tyr Leu Trp Pro Ser Ser

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                20                25                30
Ala Gln Lys Pro Thr Pro Ala Glu Gln Ser Pro Gly Pro Gly Trp Gln
      35      40      45
Ser His Thr Gln Glu Pro Ser Gln Gln Pro Pro Pro Trp Leu Ser Arg
      50      55      60
Tyr Thr Arg Val Thr Ala Glu Thr Arg Arg Ser Lys Pro Gly Asp Thr
      65      70      75      80
Ser His Gln Gly Asp Cys Val Gly Glu Arg Ala Ser Arg Pro Leu Gly
      85      90      95
Gly His Gly Gly His Arg Glu Arg Leu Gln Trp Gln Ser Arg Pro Gly
      100      105      110
Asp Arg Asp Pro Pro Arg Gly Asp Ala
      115      120

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<210> 2531  
 <211> 396  
 <212> DNA  
 <213> Homo sapiens

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<400> 2531
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gctttccaac cagctgaaga tgacaagact aaacccaag tcgctgcagc tctgtgtcat
120
ctcatcagca gccttgaga tgacaaagat agtgctgagg gggaacagac cttcgtcatc
180
agttaaagat atgctagctt ttctttttct tccagacatt cctgaatcca gagaactttc
240
ctgtaatgcg tcaaatcctt taggtctcaa ttctttccct agagagacaa ggagcacagt
300
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396

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<210> 2532  
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 <212> PRT  
 <213> Homo sapiens

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Ala Ala Leu Glu Met Thr Lys Ile Val Leu Arg Gly Asn Arg Pro Ser
      20      25      30
Ser Ser Val Lys Asp Met Leu Ala Phe Leu Phe Leu Pro Asp Ile Pro
      35      40      45
Glu Ser Arg Glu Leu Ser Cys Asn Ala Ser Asn Pro Leu Gly Leu Asn
      50      55      60
Ser Phe Pro Arg Glu Thr Arg Ser Thr Val Arg Ser Gln Gly Pro Pro
      65      70      75      80
Cys Leu Ala Arg Ala Ser Leu Leu Ser Arg Gln Gly Pro Ala Ala Ser
      85      90      95
Thr His Val Gln Gly Lys Glu Gly Arg

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100

105

<210> 2533  
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 <212> DNA  
 <213> Homo sapiens

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 120  
 aggcgctacc ggggtctcct gcactgtatg gtgaccagcg ttcgagagga gggaccccgg  
 180  
 gtccttttca aggggctggt actcaattgc tgccgcgcct tccctgtcaa catggtggtc  
 240  
 ttcgtcgctt atgaggcagt gctgaggctc gcccgggggtc tgctcacata gccggtcccc  
 300  
 acgcccagcg gccacccac cagcagctgc tggaggctcgt agtggctgga ggaggcaagg  
 360  
 ggtagtgtgg ctgggttcgg gacccacag ggccattgcc caggagaatg aggagcctcc  
 420  
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 gggcccgcga gccat  
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<210> 2534  
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 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Cys Met Val Thr Ser Val Arg Glu Glu Gly Pro Arg Val Leu Phe Lys  
 50 55 60  
 Gly Leu Val Leu Asn Cys Cys Arg Ala Phe Pro Val Asn Met Val Val  
 65 70 75 80  
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 85 90 95

<210> 2535  
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 <212> DNA  
 <213> Homo sapiens

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cgctcgggtggt aggctgctac catgaggttg aatcagaaca ccttgctgct ggggaagaag  
120  
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180  
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900  
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1140  
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1500  
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1680

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 1740  
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 1800  
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 1904

<210> 2536

<211> 207

<212> PRT

<213> Homo sapiens

<400> 2536

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Arg | Leu | Asn | Gln | Asn | Thr | Leu | Leu | Leu | Gly | Lys | Lys | Val | Val | Leu |
| 1   |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Val | Pro | Tyr | Thr | Ser | Glu | His | Val | Pro | Ser | Arg | Tyr | His | Glu | Trp | Met |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Lys | Ser | Glu | Glu | Leu | Gln | Arg | Leu | Thr | Ala | Ser | Glu | Pro | Leu | Thr | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Glu | Gln | Glu | Tyr | Ala | Met | Gln | Cys | Ser | Trp | Gln | Glu | Asp | Ala | Asp | Lys |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Cys | Thr | Phe | Ile | Val | Leu | Asp | Ala | Glu | Lys | Trp | Gln | Ala | Gln | Pro | Gly |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Ala | Thr | Glu | Glu | Ser | Cys | Met | Val | Gly | Asp | Val | Asn | Leu | Phe | Leu | Thr |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Asp | Leu | Glu | Asp | Pro | Thr | Leu | Gly | Glu | Ile | Glu | Val | Met | Ile | Ala | Glu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Pro | Ser | Cys | Arg | Gly | Lys | Gly | Leu | Gly | Thr | Glu | Ala | Val | Leu | Ala | Met |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Leu | Ser | Tyr | Gly | Val | Thr | Thr | Leu | Gly | Leu | Thr | Lys | Phe | Glu | Ala | Lys |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Ile | Gly | Gln | Gly | Asn | Glu | Pro | Ser | Ile | Arg | Met | Phe | Gln | Lys | Leu | His |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Phe | Glu | Gln | Val | Ala | Thr | Ser | Ser | Val | Phe | Gln | Glu | Val | Thr | Leu | Arg |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     |     | 175 |     |
| Leu | Thr | Val | Ser | Glu | Ser | Glu | His | Gln | Trp | Leu | Leu | Glu | Gln | Thr | Ser |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| His | Val | Glu | Glu | Lys | Pro | Tyr | Arg | Asp | Gly | Ser | Ala | Glu | Pro | Cys |     |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |

<210> 2537

<211> 509

<212> DNA

<213> Homo sapiens

<400> 2537

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 120  
 ccgctgctac tgctcgactc ccccgctatt gcgtggtggc ccttctccgg ccctgacaac  
 180

ctcgctcgg accccatcgg agcccttgcg gaccgccgca tcaccgactc ggcagctgac  
 240  
 aaagatccgt gcaaagccct catacgccgt ggggctcacc taaccgaggg tgactccgac  
 300  
 ctgtgttggg ctgcaccac cagctggaga gccctagctg cagcagcttt ggatcaacat  
 360  
 ccagcgaccg tcaagttcgc tcgggtagag tcagccgccg gtaatgcgcc ggcgatgctg  
 420  
 ctggcagcct ggctaggatt gcgtctcggc gtcccggctg agcgggtgac aaccgacgcg  
 480  
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 509

<210> 2538

<211> 169

<212> PRT

<213> Homo sapiens

<400> 2538

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Arg | Ser | Arg | Lys | Asp | Lys | Leu | Asp | Ala | Glu | Val | His | Ala | Gly | Glu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Gly | Thr | Pro | Gly | Asp | Val | Ile | Val | Leu | Arg | Phe | Ser | Gly | Ala | Met | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Lys | Arg | Pro | Ala | Ser | Val | Ile | Leu | Pro | Leu | Leu | Leu | Ser | Asp | Ser | Pro |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Val | Ile | Ala | Trp | Trp | Pro | Phe | Ser | Gly | Pro | Asp | Asn | Leu | Ala | Ser | Asp |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Pro | Ile | Gly | Ala | Leu | Ala | Asp | Arg | Arg | Ile | Thr | Asp | Ser | Ala | Ala | Asp |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Lys | Asp | Pro | Cys | Lys | Ala | Leu | Ile | Arg | Arg | Ala | Ala | His | Leu | Thr | Glu |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Gly | Asp | Ser | Asp | Leu | Cys | Trp | Ala | Arg | Thr | Thr | Ser | Trp | Arg | Ala | Leu |
|     |     |     | 100 |     |     |     | 105 |     |     |     |     |     | 110 |     |     |
| Ala | Ala | Ala | Ala | Leu | Asp | Gln | His | Pro | Ala | Thr | Val | Lys | Phe | Ala | Arg |
|     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |     |
| Val | Glu | Ser | Ala | Ala | Gly | Asn | Ala | Pro | Ala | Met | Leu | Leu | Ala | Ala | Trp |
|     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |     |
| Leu | Gly | Leu | Arg | Leu | Gly | Val | Pro | Val | Glu | Arg | Val | Thr | Thr | Asp | Ala |
| 145 |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |     |
| Pro | Gly | Ile | Ser | Ala | Ile | Val | Met | Ser |     |     |     |     |     |     |     |
|     |     |     |     |     | 165 |     |     |     |     |     |     |     |     |     |     |

<210> 2539

<211> 453

<212> DNA

<213> Homo sapiens

<400> 2539

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 120  
 cagccgaact acgacctgac gtatgacgac gtcttcatgg caccaaaccg ttcctcggtg  
 180



gggtcccgca tgaacgtcga cctcacgtca acagacgggc taggcactcc tctgcccctc  
 240  
 gtagtggcca atatgaccgc aatttcgga cgctcgatgg cagagaccat cgccaggcgc  
 300  
 ggaggcattg ctgttctgcc ccaagatata ccggcgggatt tcgtcgcccg gtccattcgg  
 360  
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 420  
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 453

<210> 2540

<211> 134

<212> PRT

<213> Homo sapiens

<400> 2540

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Ala | Ala | Ser | Arg | His | Asp | Pro | Arg | Ile | Val | Thr | Trp | Asp | Asn | Gly |
| 1   |     |     | 5   |     |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Tyr | Val | Arg | Phe | Leu | Asn | Glu | Gln | Pro | Asn | Tyr | Asp | Leu | Thr | Tyr | Asp |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |     |
| Asp | Val | Phe | Met | Ala | Pro | Asn | Arg | Ser | Ser | Val | Gly | Ser | Arg | Met | Asn |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Val | Asp | Leu | Thr | Ser | Thr | Asp | Gly | Leu | Gly | Thr | Pro | Leu | Pro | Leu | Val |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Val | Ala | Asn | Met | Thr | Ala | Ile | Ser | Gly | Arg | Arg | Met | Ala | Glu | Thr | Ile |
| 65  |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |     |
| Ala | Arg | Arg | Gly | Gly | Ile | Ala | Val | Leu | Pro | Gln | Asp | Ile | Pro | Ala | Asp |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Phe | Val | Ala | Arg | Ser | Ile | Arg | Arg | Val | Lys | Asp | Ala | His | Thr | Arg | Phe |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     | 110 |     |     |     |
| Asp | Thr | Pro | Val | Thr | Val | Asn | Pro | Thr | Thr | Thr | Val | Gly | Glu | Ala | Met |
|     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |     |
| Asn | Leu | Leu | Asn | Lys | Arg |     |     |     |     |     |     |     |     |     |     |
|     |     | 130 |     |     |     |     |     |     |     |     |     |     |     |     |     |

<210> 2541

<211> 564

<212> DNA

<213> Homo sapiens

<400> 2541

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 120  
 acagagcctg caatactccg tgtctggaat acgttatttg ctgcacacct cccagaggaa  
 180  
 catgtaacgt ctgtgtaaca tgctatcctg cacacatctg aaagaatctg tgtacacaac  
 240  
 actattatgc tgtgcacaca tttcctcata ttctgtgtag agagcacctc attttgact  
 300  
 caaatattcg gcttcataa caagttacat tgctcacatc ttaaaatatt cattacacgt  
 360

gaaaccacccg catggtaccg acatccttct ggaatgtccc gcacagaggc tgatatatgt  
 420  
 gcacagttct cactgttctg cgtgcccagc ccctcacact ggacgcccac ctcacactct  
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 564

<210> 2542  
 <211> 106  
 <212> PRT  
 <213> Homo sapiens

<400> 2542  
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 20 25 30  
 Lys Ile Phe Ile Thr Arg Glu Thr Thr Ala Trp Tyr Arg His Pro Ser  
 35 40 45  
 Gly Met Ser Arg Thr Glu Ala Asp Ile Cys Ala Gln Phe Ser Leu Phe  
 50 55 60  
 Cys Val Pro Ser Pro Ser His Trp Thr Pro Thr Ser His Ser Ser Ala  
 65 70 75 80  
 Lys Gly Asp Phe Gly Ser Pro Leu Pro Cys Ala Gly Cys Ala Gly His  
 85 90 95  
 Ser Pro Leu His Ala Ser Ser Met Thr Arg  
 100 105

<210> 2543  
 <211> 387  
 <212> DNA  
 <213> Homo sapiens

<400> 2543  
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 120  
 ccgctcctga tgagattttt gtttttcctt aacaaagaaa tgtgtatgaa tgcacgtctg  
 180  
 tttgcagggg cagggaggag gagggtcctt ggaatagctg ccgacaacag ctggaactcc  
 240  
 tgtctgggtc cccagctgg gctagagagg gcagtgatca tctgtccact ggacaggaag  
 300  
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 360  
 aatggggccc agcaggcagc agtgctg  
 387

<210> 2544  
 <211> 122  
 <212> PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2544

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Met Glu Trp Gly Gly Arg Ala Arg Val Gly Thr Cys Trp Asn Val Pro
 1           5           10           15
Met Leu Ser Ala Pro His Trp Met Thr Glu Gly Glu Gly Thr Ser Val
          20           25           30
Leu Pro Leu Leu Met Arg Phe Leu Phe Leu Pro Asn Lys Glu Met Cys
          35           40           45
Met Asn Ala Arg Leu Phe Ala Gly Ala Gly Arg Arg Arg Val Leu Gly
          50           55           60
Ile Ala Ala Asp Asn Ser Trp Asn Ser Cys Leu Gly Pro Pro Ala Gly
65           70           75           80
Leu Glu Arg Ala Val Ile Ile Cys Pro Leu Asp Arg Lys Val Cys Lys
          85           90           95
Gly Leu Phe Ala Tyr Trp Val Pro Ile Phe Ser Leu Leu Lys Pro Leu
          100          105          110
Ser Asn Gly Ala Gln Gln Ala Ala Val Leu
          115          120

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&lt;210&gt; 2545

&lt;211&gt; 336

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2545

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gcgattattt tcgtgctgcc cggacttatc atggtcgggt ggtgggcagg tttcccgtac
60
tgaccacccc tcgtatctctg tctagtcggc ggcacccctcg gcgttatgta ctcgattccg
120
ctgcgtcggg cctcgtgac aggcctggat cttccctacc cggagggcgt cgcaggagct
180
gaggtgctca aagtaggcga ttccgctggt gccgccgagg ctaacaagggt gggctctgca
240
gtcatcatcg tcggttctgt ggtctctgca gcgtacgccc tgttgctgga tcttaagctt
300
gtgaagtcgg cgctgaccaa gcctttcaag acgggc
336

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&lt;210&gt; 2546

&lt;211&gt; 112

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2546

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Ala Ile Ile Phe Val Leu Pro Gly Leu Ile Met Val Gly Trp Trp Ser
 1           5           10           15
Gly Phe Pro Tyr Trp Thr Thr Leu Ala Ile Cys Leu Val Gly Gly Ile
          20           25           30
Leu Gly Val Met Tyr Ser Ile Pro Leu Arg Arg Ala Leu Val Thr Gly
          35           40           45
Ser Asp Leu Pro Tyr Pro Glu Gly Val Ala Gly Ala Glu Val Leu Lys
          50           55           60
Val Gly Asp Ser Ala Gly Ala Ala Glu Ala Asn Lys Val Gly Leu Arg

```

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65  |     | 70  |     | 75  |     | 80  |     |     |     |     |     |     |     |     |     |
| Val | Ile | Ile | Val | Gly | Ser | Val | Val | Ser | Ala | Ala | Tyr | Ala | Leu | Leu | Ser |
|     |     | 85  |     |     |     | 90  |     |     |     |     |     |     | 95  |     |     |
| Asp | Leu | Lys | Leu | Val | Lys | Ser | Ala | Leu | Thr | Lys | Pro | Phe | Lys | Thr | Gly |
|     |     | 100 |     |     |     | 105 |     |     |     |     |     |     | 110 |     |     |

&lt;210&gt; 2547

&lt;211&gt; 556

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2547

acgcgtgcac acacacacac gcaggcgtac acgctcacia gtgcacacac acatatgagt  
60  
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120  
tatggccaat aatattatgc ccaagctaca acattccgag tcaatcacia aggttataaa  
180  
cttcatttga actgaagacc acctgtaagc acgcagctca aatgttctca cctagaaatt  
240  
caagtgtgt ttggaaagtg gacttaacgg tcaaagaaaa aggctggcc aacttcagag  
300  
agggacaccc agccctgcta cgttgcgtgt cattatgtgg tgctgtgcta tccatagaga  
360  
aagaggagat gaaaaagatt ctacaaagag agatcaaact gcaagaaagc acaaagattt  
420  
catcaccaca atatgaaggc ctcccttgga taaatgactt ttttaggtcc caataagaaa  
480  
taccatctat tctatctgga attattttat tagcttcaaa ttttattcta agattcatac  
540  
tatcagatca tctaga  
556

&lt;210&gt; 2548

&lt;211&gt; 106

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2548

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Asn | Leu | Arg | Ile | Lys | Phe | Glu | Ala | Asn | Lys | Ile | Ile | Pro | Asp | Arg |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ile | Asp | Gly | Ile | Ser | Tyr | Trp | Asp | Leu | Lys | Lys | Ser | Phe | Ile | Pro | Arg |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Arg | Pro | Ser | Tyr | Cys | Gly | Asp | Glu | Ile | Phe | Val | Leu | Ser | Cys | Ser | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ile | Ser | Leu | Cys | Arg | Ile | Phe | Phe | Ile | Ser | Ser | Phe | Ser | Met | Asp | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Thr | Ala | Pro | His | Asn | Asp | Thr | Gln | Arg | Ser | Arg | Ala | Gly | Cys | Pro | Ser |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Leu | Lys | Leu | Ala | Arg | Pro | Phe | Ser | Leu | Thr | Val | Lys | Ser | Thr | Phe | Gln |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Thr | Gln | Leu | Glu | Phe | Leu | Gly | Glu | Asn | Ile |     |     |     |     |     |     |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     |     |     |     |

<210> 2549  
 <211> 435  
 <212> DNA  
 <213> Homo sapiens

<400> 2549  
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 120  
 gctaaatcgg gcacctcttc tttcttagag caattgagtg gcgatcagaa aaaagacagc  
 180  
 caacttattg gtcaattcgg tgtaggcttt tactctgctt tcacgttggtc tgataaagta  
 240  
 acagtagaaa cacgtcgcgc aggtgcgacg gaaaatgaag cggttcgctg ggtatctgat  
 300  
 ggttctgggtg aatttactat tgagacgacg gataaagcga ctcgtgggtac acgcattact  
 360  
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 420  
 acaaaaatatt ctgat  
 435

<210> 2550  
 <211> 145  
 <212> PRT  
 <213> Homo sapiens

<400> 2550  
 Xaa Gln Pro Leu Ser Asp Arg Val Arg Ile Glu Phe Asp Lys Glu Ala  
 1 5 10 15  
 Asn Thr Val Val Ile Asp Asp Asn Gly Val Gly Met Ser Arg Glu Glu  
 20 25 30  
 Ala Ile Thr Asn Leu Gly Thr Ile Ala Lys Ser Gly Thr Ser Ser Phe  
 35 40 45  
 Leu Glu Gln Leu Ser Gly Asp Gln Lys Lys Asp Ser Gln Leu Ile Gly  
 50 55 60  
 Gln Phe Gly Val Gly Phe Tyr Ser Ala Phe Ile Val Ala Asp Lys Val  
 65 70 75 80  
 Thr Val Glu Thr Arg Arg Ala Gly Ala Thr Glu Asn Glu Ala Val Arg  
 85 90 95  
 Trp Val Ser Asp Gly Ser Gly Glu Phe Thr Ile Glu Thr Ile Asp Lys  
 100 105 110  
 Ala Thr Arg Gly Thr Arg Ile Thr Leu His Leu Lys Ala Asp Glu Lys  
 115 120 125  
 Asp Phe Ala Asp Asn Phe Arg Leu Arg Ser Leu Val Thr Lys Tyr Ser  
 130 135 140  
 Asp  
 145

<210> 2551  
 <211> 403  
 <212> DNA  
 <213> Homo sapiens

&lt;400&gt; 2551

nngccggcca gcctcacatc agtctctccg ccccggggaa ggctcagcac tttaaatacga  
 60  
 ggactccact tctggggacg cctgggtcgt tcgcccacca ggctagggt acgtccatg  
 120  
 ctccccagc aatctctgtc tacacctcct gcgggcctt gccctcctcc gaccctttc  
 180  
 cagccannaa gtccccccac cccttcagag aagcagcctc aaattccaga agtggagggt  
 240  
 ccagcctccc cgcgaggtag cagccccaca gtcttctggg agccattgtg gccagggacg  
 300  
 gcctctggac tgccaggctg ggttggggac cagggaacat cggctctactc aggtgtgagg  
 360  
 gggcaggtct ggctgcccc aaagttgggt ccatcctgga can  
 403

&lt;210&gt; 2552

&lt;211&gt; 134

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2552

Xaa Pro Ala Ser Leu Thr Ser Val Ser Pro Pro Arg Gly Arg Leu Ser  
 1 5 10 15  
 Thr Leu Asn Arg Gly Leu His Phe Trp Gly Arg Leu Val Arg Ser Pro  
 20 25 30  
 Thr Arg Pro Arg Leu Arg Ser Met Leu Pro Gln Gln Ser Leu Ser Thr  
 35 40 45  
 Pro Pro Ala Ala Pro Cys Pro Pro Thr Pro Phe Gln Pro Xaa Ser  
 50 55 60  
 Pro Pro Thr Pro Ser Glu Lys Gln Pro Gln Ile Pro Glu Val Glu Ala  
 65 70 75 80  
 Pro Ala Ser Pro Arg Gly Thr Ser Pro Thr Val Phe Trp Glu Pro Leu  
 85 90 95  
 Trp Pro Gly Thr Ala Ser Gly Leu Pro Gly Trp Val Gly Asp Gln Gly  
 100 105 110  
 Thr Ser Val Tyr Ser Gly Val Arg Gly Gln Val Trp Pro Ala Pro Lys  
 115 120 125  
 Leu Ala Pro Ser Trp Thr  
 130

&lt;210&gt; 2553

&lt;211&gt; 380

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2553

actagtgtcc ctataagaaa aggaaaggac caagacacag gaaagatgaa gcagagattg  
 60  
 gagagatata gcatgggcca aggagcactg ggagccagca gcagctggaa gaggcaggag  
 120  
 gcatcctccc tagaccgcac aggatgctac tgggtgagcc tgctgtcctg gaaaaggcgt  
 180

gaagtctgcc tgagtgggca ggggcttctg cgcagcaccc agcaaggcca aggtggaagg  
 240  
 gaccctcctg gccctgtcc tggtccacc ctcagctgct ggcaggtggg tcaccaggcc  
 300  
 tctgccccaa gaaactcctg caggcagctc tggacccct gtcttacaca ccttctcact  
 360  
 gagcctgcc gcatcccagn  
 380

<210> 2554  
 <211> 111  
 <212> PRT  
 <213> Homo sapiens

<400> 2554  
 Met Lys Gln Arg Leu Glu Arg Tyr Ser Met Gly Gln Gly Ala Leu Gly  
 1 5 10 15  
 Ala Ser Ser Ser Trp Lys Arg Gln Glu Ala Ser Ser Leu Asp Arg Thr  
 20 25 30  
 Gly Cys Tyr Trp Val Ser Leu Leu Ser Trp Lys Arg Arg Glu Val Cys  
 35 40 45  
 Leu Ser Gly Gln Gly Leu Leu Arg Ser Thr Gln Gln Gly Gln Gly Gly  
 50 55 60  
 Arg Asp Pro Pro Gly Pro Cys Pro Gly Ser Thr Leu Ser Cys Trp Gln  
 65 70 75 80  
 Val Gly His Gln Ala Ser Ala Gln Arg Asn Ser Cys Arg Gln Leu Trp  
 85 90 95  
 Thr Pro Cys Leu Thr His Leu Leu Thr Glu Pro Ala Ser Ile Pro  
 100 105 110

<210> 2555  
 <211> 368  
 <212> DNA  
 <213> Homo sapiens

<400> 2555  
 ntccggatgg aaaagtaaag accagcaata gccataacg ccattaacac ataccatata  
 60  
 atgttggttaa tgctgcccgg tagttcgggtg gcattcttca tgggcaatag tttaatggga  
 120  
 gataacgcga ataatggtag tgctgttcta gtgctcacag acctgggtcac ccaaatagaa  
 180  
 ggatttatat cctcccatat cctcattttt gtgctcgttg gcctcggcat tgtctttacc  
 240  
 gttgccactc gaggtgtaca gttccgctc ttcgggcaca tgtggcacct catgctcgat  
 300  
 tcacggaagc aaaagggcac ctccctctcc agctctcaag cattcacagt gggctctgat  
 360  
 cagcggn  
 368

<210> 2556  
 <211> 102  
 <212> PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2556

```

Met Leu Leu Met Leu Pro Gly Ser Ser Val Ala Phe Phe Met Gly Asn
 1           5           10           15
Ser Leu Met Gly Asp Asn Ala Asn Asn Gly Ser Val Val Leu Val Leu
 20           25           30
Thr Asp Leu Val Thr Gln Ile Glu Gly Phe Ile Ser Ser His Ile Leu
 35           40           45
Ile Phe Val Leu Val Gly Leu Gly Ile Val Phe Thr Val Ala Thr Arg
 50           55           60
Gly Val Gln Phe Arg Leu Phe Gly His Met Trp His Leu Met Leu Asp
 65           70           75           80
Ser Arg Lys Gln Lys Gly Thr Ser Leu Ser Ser Ser Gln Ala Phe Thr
 85           90           95
Val Gly Leu Asp His Ala
 100

```

&lt;210&gt; 2557

&lt;211&gt; 408

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2557

```

atcactactc cagttggtga ggcagttctg ggtcgcatct taaatgtgat cggtagcgccg
60
attgatgaga tgggccagct taacgcgaaa gaaaaatggg aaattcaccg tccagctcct
120
aaattcgaag accaagctgt taaagctgag atgttgatga ctggtattaa ggtcgttgat
180
cttcttgcac cttacgcaaa gggtaggcaag atcgggtctct tcggtgggtgc gggcgtaggt
240
aaaacagttt tgattcaaga gttgattcgt aacatcgcta ctgagcacgg tggatactct
300
gtattcgtag gtgtcggcga gcgtactcgc gaaggtaacg atctttgggt tgagatgaaa
360
gaatcaggcg ttatcgcaaa gaccgcactt gtattcgggt agatgaat
408

```

&lt;210&gt; 2558

&lt;211&gt; 136

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2558

```

Ile Thr Thr Pro Val Gly Glu Ala Val Leu Gly Arg Ile Leu Asn Val
 1           5           10           15
Ile Gly Glu Pro Ile Asp Glu Met Gly Pro Val Asn Ala Lys Glu Lys
 20           25           30
Trp Glu Ile His Arg Pro Ala Pro Lys Phe Glu Asp Gln Ala Val Lys
 35           40           45
Ala Glu Met Leu Met Thr Gly Ile Lys Val Val Asp Leu Leu Ala Pro
 50           55           60
Tyr Ala Lys Gly Gly Lys Ile Gly Leu Phe Gly Gly Ala Gly Val Gly

```





<210> 2561  
 <211> 429  
 <212> DNA  
 <213> Homo sapiens

<400> 2561  
 nnactcacca ctgtggttct actatgcctt ctgaccccggt cttggacttc aactgggaga  
 60  
 atgtggagcc atttgaacag gctcctcttc tggagcatat tttcttctgt cacttgtaga  
 120  
 aaagctgtat tggattgtga ggcaatgaaa acaaatgaat tcccttctcc atgtttggac  
 180  
 tcaaagacta aggtgggttat gaagggtcaa aatgtatcta tgttttggtc ccataagaac  
 240  
 aaatcactgc agatcaccta ttcattgttt cgacgtaaga cacacctggg aaccaggat  
 300  
 ggaaaagggtg aacctgcgat ttttaaccta agcatcacag aagcccatga atcaggcccc  
 360  
 taaaaatgca aagcccaagt taccagctgt tcaaaataca gtcgtgactt cagcttcacg  
 420  
 attgtcgac  
 429

<210> 2562  
 <211> 143  
 <212> PRT  
 <213> Homo sapiens

<400> 2562  
 Xaa Leu Thr Thr Val Val Leu Leu Cys Leu Leu Thr Pro Ser Trp Thr  
 1 5 10 15  
 Ser Thr Gly Arg Met Trp Ser His Leu Asn Arg Leu Leu Phe Trp Ser  
 20 25 30  
 Ile Phe Ser Ser Val Thr Cys Arg Lys Ala Val Leu Asp Cys Glu Ala  
 35 40 45  
 Met Lys Thr Asn Glu Phe Pro Ser Pro Cys Leu Asp Ser Lys Thr Lys  
 50 55 60  
 Val Val Met Lys Gly Gln Asn Val Ser Met Phe Cys Ser His Lys Asn  
 65 70 75 80  
 Lys Ser Leu Gln Ile Thr Tyr Ser Leu Phe Arg Arg Lys Thr His Leu  
 85 90 95  
 Gly Thr Gln Asp Gly Lys Gly Glu Pro Ala Ile Phe Asn Leu Ser Ile  
 100 105 110  
 Thr Glu Ala His Glu Ser Gly Pro Tyr Lys Cys Lys Ala Gln Val Thr  
 115 120 125  
 Ser Cys Ser Lys Tyr Ser Arg Asp Phe Ser Phe Thr Ile Val Asp  
 130 135 140

<210> 2563  
 <211> 267  
 <212> DNA  
 <213> Homo sapiens

&lt;400&gt; 2563

ggatcccaga cgagtgtg cagcagtatg ggggccgtgg gggcgacggc caccgtcagc  
 60  
 accccgggtca ccatccagaa catgacctcc tcttatgtca ccatcacatc ccatgtcctt  
 120  
 aaggccttta ccctttggga acaggcagag gccctcacia ggaagaacia agaattcttt  
 180  
 gctcagctca gcacaaaagt gcgcgtgttg gccctcaaca gcagcctggg ggacctgggtg  
 240  
 cactacacaa ggcagggcct ccagcgg  
 267

&lt;210&gt; 2564

&lt;211&gt; 89

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2564

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ser | Gln | Thr | Ser | Ala | Gly | Ser | Ser | Met | Gly | Ala | Val | Gly | Ala | Thr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ala | Thr | Val | Ser | Thr | Pro | Val | Thr | Ile | Gln | Asn | Met | Thr | Ser | Ser | Tyr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Val | Thr | Ile | Thr | Ser | His | Val | Leu | Lys | Ala | Phe | Thr | Leu | Trp | Glu | Gln |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ala | Glu | Ala | Leu | Thr | Arg | Lys | Asn | Lys | Glu | Phe | Phe | Ala | Gln | Leu | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Thr | Lys | Val | Arg | Val | Leu | Ala | Leu | Asn | Ser | Ser | Leu | Val | Asp | Leu | Val |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| His | Tyr | Thr | Arg | Gln | Gly | Leu | Gln | Arg |     |     |     |     |     |     |     |
|     |     |     |     |     | 85  |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 2565

&lt;211&gt; 333

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2565

cttcgcactg ctccgcgagt tcttggggga gtgagcacag cgcgtaagct cagccacgtg  
 60  
 tggttcgaat tcgattcctt ggtcaatgcc cgtgacgtgg gcggaatccc ccccccgat  
 120  
 gggccggtga aatcccagcg actgatccgc agcgacaacc tgcaggccct caccgaggcc  
 180  
 gacatcgccc agttgcagca actcgggtgc tccgatgtgg tcgatctgcg ttccacctat  
 240  
 gaggtggcca gcgagggccc ggggccgctg accgggctg gggtgaccat ccacccccat  
 300  
 tccttctg cccgaccagca cgccaatgtg cac  
 333

&lt;210&gt; 2566

&lt;211&gt; 111

&lt;212&gt; PRT

<213> Homo sapiens

<400> 2566

```

Leu Arg Thr Ala Pro Arg Val Leu Gly Gly Val Ser Thr Ala Arg Lys
 1           5           10           15
Leu Ser His Val Trp Phe Glu Phe Asp Ser Leu Val Asn Ala Arg Asp
          20           25           30
Val Gly Gly Ile Pro Thr Pro Asp Gly Pro Val Lys Ser Gln Arg Leu
          35           40           45
Ile Arg Ser Asp Asn Leu Gln Ala Leu Thr Glu Ala Asp Ile Ala Gln
          50           55           60
Leu Gln Gln Leu Gly Val Ser Asp Val Val Asp Leu Arg Ser Thr Tyr
65           70           75           80
Glu Val Ala Ser Glu Gly Pro Gly Pro Leu Thr Gly Arg Gly Val Thr
          85           90           95
Ile His Pro His Ser Phe Leu Pro Asp Gln His Ala Asn Val His
          100          105          110

```

<210> 2567

<211> 396

<212> DNA

<213> Homo sapiens

<400> 2567

```

ngaattcaaa ctggtgttcg tatgggccat aagcaaggta catatacgat gcgttttaga
60
agccagttca cagatcaacg tctattcgga accgatcaat ttagtattgg tgggcgctat
120
tctgtacgag gtttttagtgg agaagaaacc ttaagagggtg actcgggcta ttatgtacaa
180
aatgaatggg cattaccatt tagaaaacaa caaattactc catatgtagg gatagatatt
240
ggacatgtat gggggccatc tacagaaact caattaggta ataccttaat tgggtggtgta
300
gttggtgtac gtggtatggt tggtgacgat gtaaaactatg atgtatcact aggaacacca
360
attaagaaac cagaaggttt tgatacagat acgcgt
396

```

<210> 2568

<211> 132

<212> PRT

<213> Homo sapiens

<400> 2568

```

Xaa Ile Gln Thr Gly Val Arg Met Gly His Lys Gln Gly Thr Tyr Thr
 1           5           10           15
Met Arg Phe Arg Ser Gln Phe Thr Asp Gln Arg Leu Phe Gly Thr Asp
          20           25           30
Gln Phe Ser Ile Gly Gly Arg Tyr Ser Val Arg Gly Phe Ser Gly Glu
          35           40           45
Glu Thr Leu Arg Gly Asp Ser Gly Tyr Tyr Val Gln Asn Glu Trp Ala
          50           55           60
Leu Pro Phe Arg Lys Gln Gln Ile Thr Pro Tyr Val Gly Ile Asp Ile

```

```

65          70          75          80
Gly His Val Trp Gly Pro Ser Thr Glu Thr Gln Leu Gly Asn Thr Leu
          85          90          95
Ile Gly Gly Val Val Gly Val Arg Gly Met Val Gly Asp Asp Val Asn
          100          105          110
Tyr Asp Val Ser Leu Gly Thr Pro Ile Lys Lys Pro Glu Gly Phe Asp
          115          120          125
Thr Asp Thr Arg
          130

```

<210> 2569  
 <211> 330  
 <212> DNA  
 <213> Homo sapiens

```

<400> 2569
cttgctgctg gtgctgatgt gtccatgatt ggccagttcg gcgtcggttt ctactctgcc
60
tacctcgtcg ccgatagagt tgcctgacc accaagcaca acgatgacga gcagtacgtg
120
tgaggagtcac aagcggggcg gtcgttcact gttactcgtg acacgtcagg ggagcagctt
180
ggcaggggca ctaagatcac actgttcctc aaggacgac agctggagta ccttgaggag
240
cgtcgcctca aggatctggt caagaagcac tctgagttca tcagctaccc catctccctg
300
tggaactgaaa agacaacaga gaaggaaatt
330

```

<210> 2570  
 <211> 110  
 <212> PRT  
 <213> Homo sapiens

```

<400> 2570
Leu Ala Ala Gly Ala Asp Val Ser Met Ile Gly Gln Phe Gly Val Gly
1      5      10      15
Phe Tyr Ser Ala Tyr Leu Val Ala Asp Arg Val Val Val Thr Thr Lys
20     25     30
His Asn Asp Asp Glu Gln Tyr Val Trp Glu Ser Gln Ala Gly Gly Ser
35     40     45
Phe Thr Val Thr Arg Asp Thr Ser Gly Glu Gln Leu Gly Arg Gly Thr
50     55     60
Lys Ile Thr Leu Phe Leu Lys Asp Asp Gln Leu Glu Tyr Leu Glu Glu
65     70     75     80
Arg Arg Leu Lys Asp Leu Val Lys Lys His Ser Glu Phe Ile Ser Tyr
85     90     95
Pro Ile Ser Leu Trp Thr Glu Lys Thr Thr Glu Lys Glu Ile
100    105    110

```

<210> 2571  
 <211> 335  
 <212> DNA  
 <213> Homo sapiens

<400> 2571  
gaattcgcca atgttttctc cggtagggc tccacagtaa cccttatcgg ccgtccct  
60  
gtgctcctta aacatctcga taatgaacta tctgagctct ttactgagat cgctcgggag  
120  
aaatgggatg tccgtttagg gcagggaacg acagctatcg accaggtgga gaagcagcgt  
180  
gaagatgggt cttcctactt cgaaaccacc attacatttg aagacggcag cactgttacc  
240  
ggtgacgcat tcttagttgc taccggacgt acccctaaca ccgaccgcct tggcctcgac  
300  
aatggttccg gtgtgaaggt tgaaagggga cgcgt  
335

<210> 2572  
<211> 111  
<212> PRT  
<213> Homo sapiens

<400> 2572  
Glu Phe Ala Asn Val Phe Ser Gly Met Gly Ser Thr Val Thr Leu Ile  
1 5 10 15  
Gly Arg Ser Pro Val Leu Leu Lys His Leu Asp Asn Glu Leu Ser Glu  
20 25 30  
Leu Phe Thr Glu Ile Ala Arg Glu Lys Trp Asp Val Arg Leu Gly Gln  
35 40 45  
Gly Thr Thr Ala Ile Asp Gln Val Glu Lys Gln Arg Glu Asp Gly Ser  
50 55 60  
Ser Tyr Phe Glu Thr Thr Ile Thr Phe Glu Asp Gly Ser Thr Val Thr  
65 70 75 80  
Gly Asp Ala Phe Leu Val Ala Thr Gly Arg Thr Pro Asn Thr Asp Arg  
85 90 95  
Leu Gly Leu Asp Asn Gly Ser Gly Val Lys Val Glu Arg Gly Arg  
100 105 110

<210> 2573  
<211> 460  
<212> DNA  
<213> Homo sapiens

<400> 2573  
gtcgacaagt accggggcat tgtggttatg gggacggtag atctgggccc tctcgtcagg  
60  
gccggatcca taccggaccg ttctcgtcagg gtggtcggac atcgacgaca ccgcagatgc  
120  
cgagacgacg ttgatacgtc caccggcgcg gtccgtgatc cacgccgtcg tcgccgttgc  
180  
cgccactggc acgatgaggg ccatcaccga gaagagaacg gccaccactc gcagaccacc  
240  
tcgtcccaga agagcgagga cgaaggcgat gacggcgatg accagagccg gtacagccaa  
300  
cgatcccacc agaacggagg agatgaaggt gagggcattg tgtgagggga ggatcgcggc  
360

<210> 2574  
<211> 105  
<212> PRT  
<213> Homo sapiens

```
<210> 2575
<211> 3954
<212> DNA
<213> Homo sapiens
```

1832

ccccggccag ccagccgcca caggaactgg tgtgcctacg tggtagaccg gacagtgagc  
720  
tgtgtccttg aggatggagt ggagacatat gtcaagtacc agccttgtgc ctggggccag  
780  
ccccagtgtc cccaaagcat catgtaccgc cgcttcctcc gccctcgcta ccgtgtggcc  
840  
tacaagacag tgaccgacat ggagtggagg tgctgtcagg gttatggggg cgatgactgt  
900  
gctgagagtc ccgctccagc gctggggcct gcgtcttcca caccacggcc cctggcccgg  
960  
cctgccccgc ccaacctctc tggtccagc gcaggcagcc ccctcagtgg actgggggga  
1020  
gaaggtcctg gggagtcaga gaaggtgcag cagctggagg aacaggtgca gagcctgacc  
1080  
aaggagctgc aaggcctgcg gggcgctcctg caaggactga gcggggcgctt ggcagaggat  
1140  
gtgcagaggg ctgtggagac ggccttcaac gggaggcagc agccagctga cgcggctgcc  
1200  
cgccctgggg tgcataaac cctcaatgag atccagcacc agctgcagct cctggacacc  
1260  
cgctgttcca ccacgacca ggagctgggt cacctcaaca accatcatgg cggcagcagc  
1320  
agcagtgggg gcagcagggc ccagcccca gcctcagccc ctccggggcc cagtgaggag  
1380  
ctgctgcggc agctggagca gcggttgagc gagtcctgct ccgtgtgcct ggccgggcta  
1440  
gatggcttcc gccggcagca gcaggaggac agggagcggc tgcgagcgat ggagaagctg  
1500  
ctggcctcgg tggaggagcg gcaacggcac ctgcagggc tggcggtggg ccgcaggccc  
1560  
cctcaggaat gctgctctcc agagctgggc cggcgactgg cagagctgga gcgcaggctg  
1620  
gatgtcgtgg ccggctcagt gacagtgtgt agtgggcggc gaggcacaga gctgggagga  
1680  
gccgcggggc agggaggcca cccccaggc tacaccagct tggcctccc cctgtctcgc  
1740  
ctggaggacc gcttcaactc caccctgggc ccttcggagg agcaggagga gagctggcct  
1800  
ggggctcctg gggggctgag ccaactggctg cctgctgccc ggggcccact agagcagttg  
1860  
ggggggctgc tggccaatgt gagcggggag ctgggggggc ggttgatct gttggaggag  
1920  
caggtggcag gggccatgca ggcagtcggg cagctctgct ctggggcccc tggggagcag  
1980  
gactctcaag tcagcgagat cctcagtgcc ttggagcgca gggtagctga cagtggggg  
2040  
cagctgcggc tggtagggctc cggcctgcac acgggtggaag cagcggggga ggcccggcag  
2100  
gccacgctgg agggattaca agaggttgtg ggccggctcc aggatcgtgt ggatgccag  
2160  
gatgagacag ctgcagagtt cactacgg ctgaatctca ctgcggcccc gctaggccaa  
2220  
ctggaggggc tgctgcaggc ccatggggat gagggctgtg gggcctgtgg cggagtccaa  
2280



gaggaactag gccgccttcg ggatggtgtg gagcgctgct cctgccccct gttgcctcct  
2340  
cggggtcctg gggctggtcc aggtgttggg ggcccaagcc gtggggcccct ggacggcttc  
2400  
agcgtgtttg ggggcagctc aggtctagcc ctgcaggccc tgcaaggaga gctctctgag  
2460  
gttattctca gcttcagctc cctcaatgac tcaactgaatg agctccagac cactgtggag  
2520  
ggccaggcg ctgatctggc tgacctgggg gcaaccaagg accgtatcat ttctgagatt  
2580  
aacaggctgc agcaggaggc cacagagcat gctacagaga gtgaagagcg cttccgaggc  
2640  
ctagaggagg gacaagcaca ggccggccag tgccccagct tagaggggag attggggcgt  
2700  
cttgagggtg tctgtgaacg gttggacact gtggctgggg gactgcaggg cctgcgcgag  
2760  
ggcctttcca gacacgtggc tgggctctgg gctgggctcc gggaaaccaa caccaccagc  
2820  
cagatgcagg cagccctgct ggagaagctg gtcgggggac aggcgggcct gggcaggcgg  
2880  
ctgggtgccc ttaacagctc cctgcagctc ctggaggacc gtctgcacca gctcagcctg  
2940  
aaggacctca ctgggcctgc aggagaggct gggcccccag ggcctcctgg gctgcaggga  
3000  
ccccaggcc ctgctggacc tccaggatca ccaggcaagg acgggcaaga gggccccatc  
3060  
gggccaccag gtcctcaagg tgaacaggga gtggaggggg caccagcagc ccctgtgccc  
3120  
caagtggcat tttcagctgc tctgagtttg ccccggtctg aaccaggcac ggtccccttc  
3180  
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<211> 1016

<212> PRT

<213> Homo sapiens

<400> 2576

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Pro | Arg | Thr | Leu | Trp | Ser | Cys | Tyr | Leu | Cys | Cys | Leu | Leu | Thr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ala | Ala | Ala | Gly | Ala | Ala | Ser | Tyr | Pro | Pro | Arg | Gly | Phe | Ser | Leu | Tyr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Thr | Gly | Ser | Ser | Gly | Ala | Leu | Ser | Pro | Gly | Gly | Pro | Gln | Ala | Gln | Ile |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ala | Pro | Arg | Pro | Ala | Ser | Arg | His | Arg | Asn | Trp | Cys | Ala | Tyr | Val | Val |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Thr | Arg | Thr | Val | Ser | Cys | Val | Leu | Glu | Asp | Gly | Val | Glu | Thr | Tyr | Val |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Lys | Tyr | Gln | Pro | Cys | Ala | Trp | Gly | Gln | Pro | Gln | Cys | Pro | Gln | Ser | Ile |
|     |     |     |     | 85  |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Met | Tyr | Arg | Arg | Phe | Leu | Arg | Pro | Arg | Tyr | Arg | Val | Ala | Tyr | Lys | Thr |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Val | Thr | Asp | Met | Glu | Trp | Arg | Cys | Cys | Gln | Gly | Tyr | Gly | Gly | Asp | Asp |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Cys | Ala | Glu | Ser | Pro | Ala | Pro | Ala | Leu | Gly | Pro | Ala | Ser | Ser | Thr | Pro |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Arg | Pro | Leu | Ala | Arg | Pro | Ala | Arg | Pro | Asn | Leu | Ser | Gly | Ser | Ser | Ala |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Gly | Ser | Pro | Leu | Ser | Gly | Leu | Gly | Gly | Glu | Gly | Pro | Gly | Glu | Ser | Glu |
|     |     |     |     | 165 |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Lys | Val | Gln | Gln | Leu | Glu | Glu | Gln | Val | Gln | Ser | Leu | Thr | Lys | Glu | Leu |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Gln | Gly | Leu | Arg | Gly | Val | Leu | Gln | Gly | Leu | Ser | Gly | Arg | Leu | Ala | Glu |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Asp | Val | Gln | Arg | Ala | Val | Glu | Thr | Ala | Phe | Asn | Gly | Arg | Gln | Gln | Pro |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Ala | Asp | Ala | Ala | Ala | Arg | Pro | Gly | Val | His | Glu | Thr | Leu | Asn | Glu | Ile |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |
| Gln | His | Gln | Leu | Gln | Leu | Leu | Asp | Thr | Arg | Val | Ser | Thr | His | Asp | Gln |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Glu | Leu | Gly | His | Leu | Asn | Asn | His | His | Gly | Gly | Ser | Ser | Ser | Ser | Gly |
|     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |     |     |
| Gly | Ser | Arg | Ala | Pro | Ala | Pro | Ala | Ser | Ala | Pro | Pro | Gly | Pro | Ser | Glu |
|     |     | 275 |     |     |     | 280 |     |     |     |     |     | 285 |     |     |     |
| Glu | Leu | Leu | Arg | Gln | Leu | Glu | Gln | Arg | Leu | Gln | Glu | Ser | Cys | Ser | Val |
|     | 290 |     |     |     |     | 295 |     |     |     |     | 300 |     |     |     |     |
| Cys | Leu | Ala | Gly | Leu | Asp | Gly | Phe | Arg | Arg | Gln | Gln | Glu | Asp | Arg |     |
| 305 |     |     |     |     | 310 |     |     |     |     | 315 |     |     |     | 320 |     |
| Glu | Arg | Leu | Arg | Ala | Met | Glu | Lys | Leu | Leu | Ala | Ser | Val | Glu | Glu | Arg |
|     |     |     |     | 325 |     |     |     | 330 |     |     |     |     |     | 335 |     |
| Gln | Arg | His | Leu | Ala | Gly | Leu | Ala | Val | Gly | Arg | Arg | Pro | Pro | Gln | Glu |
|     |     |     | 340 |     |     |     |     | 345 |     |     |     |     | 350 |     |     |
| Cys | Cys | Ser | Pro | Glu | Leu | Gly | Arg | Arg | Leu | Ala | Glu | Leu | Glu | Arg | Arg |

|   |     |     |
|---|-----|-----|
| 355   | 360 | 365 |
| Leu Asp Val Val Ala Gly Ser Val Thr Val Leu Ser Gly Arg Arg Gly |     |     |
| 370   | 375 | 380 |
| Thr Glu Leu Gly Gly Ala Ala Gly Gln Gly Gly His Pro Pro Gly Tyr |     |     |
| 385   | 390 | 395 |
| Thr Ser Leu Ala Ser Arg Leu Ser Arg Leu Glu Asp Arg Phe Asn Ser |     |     |
| 405   | 410 | 415 |
| Thr Leu Gly Pro Ser Glu Glu Gln Glu Glu Ser Trp Pro Gly Ala Pro |     |     |
| 420   | 425 | 430 |
| Gly Gly Leu Ser His Trp Leu Pro Ala Ala Arg Gly Arg Leu Glu Gln |     |     |
| 435   | 440 | 445 |
| Leu Gly Gly Leu Leu Ala Asn Val Ser Gly Glu Leu Gly Gly Arg Leu |     |     |
| 450   | 455 | 460 |
| Asp Leu Leu Glu Glu Gln Val Ala Gly Ala Met Gln Ala Cys Gly Gln |     |     |
| 465   | 470 | 475 |
| Leu Cys Ser Gly Ala Pro Gly Glu Gln Asp Ser Gln Val Ser Glu Ile |     |     |
| 485   | 490 | 495 |
| Leu Ser Ala Leu Glu Arg Arg Val Leu Asp Ser Glu Gly Gln Leu Arg |     |     |
| 500   | 505 | 510 |
| Leu Val Gly Ser Gly Leu His Thr Val Glu Ala Ala Gly Glu Ala Arg |     |     |
| 515   | 520 | 525 |
| Gln Ala Thr Leu Glu Gly Leu Gln Glu Val Val Gly Arg Leu Gln Asp |     |     |
| 530   | 535 | 540 |
| Arg Val Asp Ala Gln Asp Glu Thr Ala Ala Glu Phe Thr Leu Arg Leu |     |     |
| 545   | 550 | 555 |
| Asn Leu Thr Ala Ala Arg Leu Gly Gln Leu Glu Gly Leu Leu Gln Ala |     |     |
| 565   | 570 | 575 |
| His Gly Asp Glu Gly Cys Gly Ala Cys Gly Gly Val Gln Glu Glu Leu |     |     |
| 580   | 585 | 590 |
| Gly Arg Leu Arg Asp Gly Val Glu Arg Cys Ser Cys Pro Leu Leu Pro |     |     |
| 595   | 600 | 605 |
| Pro Arg Gly Pro Gly Ala Gly Pro Gly Val Gly Gly Pro Ser Arg Gly |     |     |
| 610   | 615 | 620 |
| Pro Leu Asp Gly Phe Ser Val Phe Gly Gly Ser Ser Gly Ser Ala Leu |     |     |
| 625   | 630 | 635 |
| Gln Ala Leu Gln Gly Glu Leu Ser Glu Val Ile Leu Ser Phe Ser Ser |     |     |
| 645   | 650 | 655 |
| Leu Asn Asp Ser Leu Asn Glu Leu Gln Thr Thr Val Glu Gly Gln Gly |     |     |
| 660   | 665 | 670 |
| Ala Asp Leu Ala Asp Leu Gly Ala Thr Lys Asp Arg Ile Ile Ser Glu |     |     |
| 675   | 680 | 685 |
| Ile Asn Arg Leu Gln Gln Glu Ala Thr Glu His Ala Thr Glu Ser Glu |     |     |
| 690   | 695 | 700 |
| Glu Arg Phe Arg Gly Leu Glu Glu Gly Gln Ala Gln Ala Gly Gln Cys |     |     |
| 705   | 710 | 715 |
| Pro Ser Leu Glu Gly Arg Leu Gly Arg Leu Glu Gly Val Cys Glu Arg |     |     |
| 725   | 730 | 735 |
| Leu Asp Thr Val Ala Gly Gly Leu Gln Gly Leu Arg Glu Gly Leu Ser |     |     |
| 740   | 745 | 750 |
| Arg His Val Ala Gly Leu Trp Ala Gly Leu Arg Glu Thr Asn Thr Thr |     |     |
| 755   | 760 | 765 |
| Ser Gln Met Gln Ala Ala Leu Leu Glu Lys Leu Val Gly Gly Gln Ala |     |     |
| 770   | 775 | 780 |
| Gly Leu Gly Arg Arg Leu Gly Ala Leu Asn Ser Ser Leu Gln Leu Leu |     |     |

|     |      |     |     |     |     |      |      |     |     |     |     |      |     |     |
|-----|------|-----|-----|-----|-----|------|------|-----|-----|-----|-----|------|-----|-----|
| 785 |      |     |     |     | 790 |      |      |     |     | 795 |     |      |     | 800 |
| Glu | Asp  | Arg | Leu | His | Gln | Leu  | Ser  | Leu | Lys | Asp | Leu | Thr  | Gly | Pro |
|     |      |     |     | 805 |     |      |      |     | 810 |     |     |      |     | 815 |
| Gly | Glu  | Ala | Gly | Pro | Pro | Gly  | Pro  | Pro | Gly | Leu | Gln | Gly  | Pro | Pro |
|     |      |     | 820 |     |     |      |      |     | 825 |     |     |      |     | 830 |
| Pro | Ala  | Gly | Pro | Pro | Gly | Ser  | Pro  | Gly | Lys | Asp | Gly | Gln  | Glu | Gly |
|     |      | 835 |     |     |     |      | 840  |     |     |     | 845 |      |     |     |
| Ile | Gly  | Pro | Pro | Gly | Pro | Gln  | Gly  | Glu | Gln | Gly | Val | Glu  | Gly | Ala |
|     | 850  |     |     |     |     | 855  |      |     |     |     | 860 |      |     |     |
| Ala | Ala  | Pro | Val | Pro | Gln | Val  | Ala  | Phe | Ser | Ala | Ala | Leu  | Ser | Leu |
| 865 |      |     |     |     | 870 |      |      |     |     | 875 |     |      |     | 880 |
| Arg | Ser  | Glu | Pro | Gly | Thr | Val  | Pro  | Phe | Asp | Arg | Val | Leu  | Leu | Asn |
|     |      |     |     | 885 |     |      |      |     | 890 |     |     |      |     | 895 |
| Gly | Gly  | Tyr | Tyr | Asp | Pro | Glu  | Thr  | Gly | Val | Phe | Thr | Ala  | Pro | Leu |
|     |      |     | 900 |     |     |      |      | 905 |     |     |     |      | 910 |     |
| Gly | Arg  | Tyr | Leu | Leu | Ser | Ala  | Val  | Leu | Thr | Gly | His | Arg  | His | Glu |
|     | 915  |     |     |     |     |      | 920  |     |     |     |     | 925  |     | Lys |
| Val | Glu  | Ala | Val | Leu | Ser | Arg  | Ser  | Asn | Gln | Gly | Val | Ala  | Arg | Val |
|     | 930  |     |     |     |     | 935  |      |     |     |     | 940 |      |     | Asp |
| Ser | Gly  | Gly | Tyr | Glu | Pro | Glu  | Gly  | Leu | Glu | Asn | Lys | Pro  | Val | Ala |
| 945 |      |     |     |     | 950 |      |      |     |     | 955 |     |      |     | 960 |
| Ser | Gln  | Pro | Ser | Pro | Gly | Thr  | Leu  | Gly | Val | Phe | Ser | Leu  | Ile | Leu |
|     |      |     |     | 965 |     |      |      |     | 970 |     |     |      |     | 975 |
| Leu | Gln  | Ala | Gly | Asp | Thr | Val  | Cys  | Val | Asp | Leu | Val | Met  | Gly | Gln |
|     |      | 980 |     |     |     |      |      | 985 |     |     |     | 990  |     | Leu |
| Ala | His  | Ser | Glu | Glu | Pro | Leu  | Thr  | Ile | Phe | Ser | Gly | Ala  | Leu | Tyr |
|     | 995  |     |     |     |     |      | 1000 |     |     |     |     | 1005 |     |     |
| Gly | Asp  | Pro | Glu | Leu | Glu | His  | Ala  |     |     |     |     |      |     |     |
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&lt;210&gt; 2577

&lt;211&gt; 343

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2577

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120

tgctgagcaa attacgaggg tcaacaggag cagggcagac gcttctccca cctgctggcc

180

agtgttcctt cggctaccgt gcactcagcc ccacagtgc ccctgagtgg ataccggccc

240

tgctgcccct gggctctcaa tgggggctcg gggcctcaca gggccagcac gageccacttg

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343

&lt;210&gt; 2578

&lt;211&gt; 100

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2578

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Met Ala Ser Trp Ala Ser Arg Arg Ser Trp Gly Trp Gly Gly Gly Val
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Val His Ser Ser Pro Ala Ala Ala Asp Leu Glu Pro Ser Val Ala Lys
          20           25           30
Cys Leu Leu Ser Lys Leu Arg Gly Ser Thr Gly Ala Gly Gln Thr Leu
          35           40           45
Leu Pro Pro Ala Gly Gln Cys Ser Leu Gly Tyr Arg Ala Leu Ser Pro
          50           55           60
Thr Val Thr Pro Glu Trp Ile Pro Ala Leu Pro Ala Leu Gly Ser Gln
65           70           75           80
Trp Gly Leu Gly Ala Ser Gln Gly Gln His Glu Pro Leu Ala Arg Val
          85           90           95
Ser Asn Arg Pro
          100

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&lt;210&gt; 2579

&lt;211&gt; 420

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2579

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&lt;210&gt; 2580

&lt;211&gt; 140

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2580

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          20           25           30
Thr Ala Thr Glu Ile Arg Asn Gln Val Lys Lys Glu Met Ile Leu Ala
          35           40           45
Lys Arg Phe Phe Phe Ile Val Phe Thr Asp Ala Leu Cys Trp Ile Pro
          50           55           60
Ile Phe Val Val Lys Phe Leu Ser Leu Leu Gln Val Glu Ile Pro Gly
65           70           75           80
Thr Ile Thr Ser Trp Val Val Ile Phe Ile Leu Pro Ile Asn Ser Ala

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1839

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 145                      150

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<211> 7098

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<213> Homo sapiens

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&lt;210&gt; 2584

&lt;211&gt; 1186

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2584

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Glu | Val | Asp | Thr | Glu | Glu | Lys | Arg | His | Arg | Thr | Arg | Ser | Lys | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Val | Arg | Val | Pro | Val | Glu | Pro | Ala | Ile | Gln | Glu | Leu | Phe | Ser | Cys | Pro |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Thr | Pro | Gly | Cys | Asp | Gly | Ser | Gly | His | Val | Ser | Gly | Lys | Tyr | Ala | Arg |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| His | Arg | Ser | Val | Tyr | Gly | Cys | Pro | Leu | Ala | Lys | Lys | Arg | Lys | Thr | Gln |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Asp | Lys | Gln | Pro | Gln | Glu | Pro | Ala | Pro | Lys | Arg | Lys | Pro | Phe | Ala | Val |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Lys | Ala | Asp | Ser | Ser | Ser | Val | Asp | Glu | Cys | Asp | Asp | Ser | Asp | Gly | Thr |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Glu | Asp | Met | Asp | Glu | Lys | Glu | Glu | Asp | Glu | Gly | Glu | Glu | Tyr | Ser | Glu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Asp | Asn | Asp | Glu | Pro | Gly | Asp | Glu | Asp | Glu | Glu | Asp | Glu | Glu | Gly | Asp |

1845

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|
| 545 |     |     |     |     | 550 |     |     |     |     | 555 |     |     |     | 560     |
| Val | Asn | Ser | Asn | Arg | Asn | Ser | His | Arg | Ser | Leu | Ser | Gly | Cys | Pro Ile |
|     |     |     |     | 565 |     |     |     |     | 570 |     |     |     |     | 575     |
| Ala | Ala | Ala | Glu | Lys | Leu | Ala | Lys | Ala | Gln | Glu | Lys | His | Gln | Ser Cys |
|     |     |     | 580 |     |     |     |     | 585 |     |     |     |     | 590 |         |
| Asp | Val | Ser | Lys | Ser | Ser | Gln | Ala | Ser | Asp | Arg | Val | Leu | Arg | Pro Met |
|     | 595 |     |     |     |     | 600 |     |     |     |     | 605 |     |     |         |
| Cys | Phe | Val | Lys | Gln | Leu | Glu | Ile | Pro | Gln | Tyr | Gly | Tyr | Arg | Asn Asn |
|     | 610 |     |     |     |     | 615 |     |     |     |     | 620 |     |     |         |
| Val | Pro | Thr | Thr | Thr | Pro | Arg | Ser | Asn | Leu | Ala | Lys | Glu | Leu | Glu Lys |
|     | 625 |     |     |     | 630 |     |     |     |     | 635 |     |     |     | 640     |
| Tyr | Ser | Lys | Thr | Ser | Phe | Glu | Tyr | Asn | Ser | Tyr | Asp | Asn | His | Thr Tyr |
|     |     |     | 645 |     |     |     |     | 650 |     |     |     |     |     | 655     |
| Gly | Lys | Arg | Ala | Ile | Ala | Pro | Lys | Val | Gln | Thr | Arg | Asp | Ile | Ser Pro |
|     |     |     | 660 |     |     |     |     | 665 |     |     |     |     | 670 |         |
| Lys | Gly | Tyr | Asp | Asp | Ala | Lys | Arg | Tyr | Cys | Lys | Asp | Pro | Ser | Pro Ser |
|     | 675 |     |     |     |     |     | 680 |     |     |     | 685 |     |     |         |
| Ser | Ser | Ser | Thr | Ser | Ser | Tyr | Ala | Pro | Ser | Ser | Ser | Ser | Asn | Leu Ser |
|     | 690 |     |     |     |     | 695 |     |     |     | 700 |     |     |     |         |
| Cys | Gly | Gly | Gly | Ser | Ser | Ala | Ser | Ser | Thr | Cys | Ser | Lys | Ser | Ser Phe |
|     | 705 |     |     | 710 |     |     |     |     | 715 |     |     |     |     | 720     |
| Asp | Tyr | Thr | His | Asp | Met | Glu | Ala | Ala | His | Met | Ala | Ala | Thr | Ala Ile |
|     |     |     | 725 |     |     |     |     | 730 |     |     |     |     |     | 735     |
| Leu | Asn | Leu | Ser | Thr | Arg | Cys | Arg | Glu | Met | Pro | Gln | Asn | Leu | Ser Thr |
|     |     |     | 740 |     |     |     |     | 745 |     |     |     |     | 750 |         |
| Lys | Pro | Gln | Asp | Leu | Cys | Ala | Thr | Arg | Asn | Pro | Asp | Met | Glu | Val Asp |
|     | 755 |     |     |     |     | 760 |     |     |     |     | 765 |     |     |         |
| Glu | Asn | Gly | Thr | Leu | Asp | Leu | Ser | Met | Asn | Lys | Gln | Arg | Pro | Arg Asp |
|     | 770 |     |     |     | 775 |     |     |     |     | 780 |     |     |     |         |
| Ser | Cys | Cys | Pro | Ile | Leu | Thr | Pro | Leu | Glu | Pro | Met | Ser | Pro | Gln Gln |
|     | 785 |     |     | 790 |     |     |     |     | 795 |     |     |     |     | 800     |
| Gln | Ala | Val | Met | Asn | Asn | Arg | Cys | Phe | Gln | Leu | Gly | Glu | Gly | Asp Cys |
|     |     |     | 805 |     |     |     |     | 810 |     |     |     |     |     | 815     |
| Trp | Asp | Leu | Pro | Val | Asp | Tyr | Thr | Lys | Met | Lys | Pro | Arg | Arg | Ile Asp |
|     |     |     | 820 |     |     |     |     | 825 |     |     |     |     | 830 |         |
| Glu | Asp | Glu | Ser | Lys | Asp | Ile | Thr | Pro | Glu | Asp | Leu | Asp | Pro | Phe Gln |
|     | 835 |     |     |     |     | 840 |     |     |     |     | 845 |     |     |         |
| Glu | Ala | Leu | Glu | Glu | Arg | Arg | Tyr | Pro | Gly | Glu | Val | Thr | Ile | Pro Ser |
|     | 850 |     |     |     | 855 |     |     |     |     | 860 |     |     |     |         |
| Pro | Lys | Pro | Lys | Tyr | Pro | Gln | Cys | Lys | Glu | Ser | Lys | Lys | Asp | Leu Ile |
|     | 865 |     |     | 870 |     |     |     |     | 875 |     |     |     |     | 880     |
| Thr | Leu | Ser | Gly | Cys | Pro | Leu | Ala | Asp | Lys | Ser | Ile | Arg | Ser | Met Leu |
|     |     |     | 885 |     |     |     |     | 890 |     |     |     |     |     | 895     |
| Ala | Thr | Ser | Ser | Gln | Glu | Leu | Lys | Cys | Pro | Thr | Pro | Gly | Cys | Asp Gly |
|     |     |     | 900 |     |     |     |     | 905 |     |     |     |     | 910 |         |
| Ser | Gly | His | Ile | Thr | Gly | Asn | Tyr | Ala | Ser | His | Arg | Ser | Leu | Ser Gly |
|     | 915 |     |     |     |     | 920 |     |     |     |     |     | 925 |     |         |
| Cys | Pro | Arg | Ala | Lys | Lys | Ser | Gly | Ile | Arg | Ile | Ala | Gln | Ser | Lys Glu |
|     | 930 |     |     |     | 935 |     |     |     |     |     | 940 |     |     |         |
| Asp | Lys | Glu | Asp | Gln | Glu | Pro | Ile | Arg | Cys | Pro | Val | Pro | Gly | Cys Asp |
|     | 945 |     |     | 950 |     |     |     |     | 955 |     |     |     |     | 960     |
| Gly | Gln | Gly | His | Ile | Thr | Gly | Lys | Tyr | Ala | Ser | His | Arg | Ser | Ala Ser |
|     |     |     | 965 |     |     |     |     | 970 |     |     |     |     |     | 975     |
| Gly | Cys | Pro | Leu | Ala | Ala | Lys | Arg | Gln | Lys | Asp | Gly | Tyr | Leu | Asn Gly |

980 985 990  
 Ser Gln Phe Ser Trp Lys Ser Val Lys Thr Glu Gly Met Ser Cys Pro  
 995 1000 1005  
 Thr Pro Gly Cys Asp Gly Ser Gly His Val Ser Gly Ser Phe Leu Thr  
 1010 1015 1020  
 His Arg Ser Leu Ser Gly Cys Pro Arg Ala Thr Ser Ala Met Lys Lys  
 1025 1030 1035 1040  
 Ala Lys Leu Ser Gly Glu Gln Met Leu Thr Ile Lys Gln Arg Ala Ser  
 1045 1050 1055  
 Asn Gly Ile Glu Asn Asp Glu Glu Ile Lys Gln Leu Asp Glu Glu Ile  
 1060 1065 1070  
 Lys Glu Leu Asn Glu Ser Asn Ser Gln Met Glu Ala Asp Met Ile Lys  
 1075 1080 1085  
 Leu Arg Thr Gln Ile Thr Thr Met Glu Ser Asn Leu Lys Thr Ile Glu  
 1090 1095 1100  
 Glu Glu Asn Lys Val Ile Glu Gln Gln Asn Glu Ser Leu Leu His Glu  
 1105 1110 1115 1120  
 Leu Ala Asn Leu Ser Gln Ser Leu Ile His Ser Leu Ala Asn Ile Gln  
 1125 1130 1135  
 Leu Pro His Met Asp Pro Ile Asn Glu Gln Asn Phe Asp Ala Tyr Val  
 1140 1145 1150  
 Thr Thr Leu Thr Glu Met Tyr Thr Asn Gln Asp Arg Tyr Gln Ser Pro  
 1155 1160 1165  
 Glu Asn Lys Ala Leu Leu Glu Asn Ile Lys Gln Ala Val Arg Gly Ile  
 1170 1175 1180  
 Gln Val  
 1185

&lt;210&gt; 2585

&lt;211&gt; 542

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2585

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 ccaagagccc agggatcgcc tcgctgacag accccaaaac acggggccacg ccaccccgtc  
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 ctctaggtac ctgtgcccc agtctcaagc atcactccgt gtctccctca catgccttct  
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 ct  
 542

<210> 2586  
 <211> 122  
 <212> PRT  
 <213> Homo sapiens

<400> 2586  
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 Lys Thr Arg Ala Thr Pro Pro Arg Pro Leu Gly Thr Cys Ala Pro Ser  
           20                  25                  30  
 Leu Lys His His Ser Val Ser Pro Ser His Ala Phe Trp Ala Ser Ser  
           35                  40                  45  
 Pro Gln Arg Ala Lys Val Cys Glu His Phe Leu Ser Pro Leu Asn Gly  
   50                  55                  60  
 Leu Ser His Val Ile Leu Thr Arg Leu Leu Cys Phe Ile Thr Ser Val  
 65                  70                  75                  80  
 Ser Gly Ala Ser His Pro Arg Glu Glu Trp Trp Gly Cys Arg Leu Thr  
                   85                  90                  95  
 Leu Gly His Leu Ala Ala Ala Ser Val Leu Met Thr Thr Leu Leu Pro  
           100                  105                  110  
 Gln Ala Leu Leu Leu Asn Val Leu Ala Leu  
       115                  120

<210> 2587  
 <211> 435  
 <212> DNA  
 <213> Homo sapiens

<400> 2587  
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 120  
 gatgccggct acccgccgct ggtaaccccg tcgtcccaga tcgtgggaac ccaggcgggtg  
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 240  
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 300  
 aagaagcaga ccggcaagga gccgatcgac tgccgtcccg ccgacttgct cgagcctgag  
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 435

<210> 2588  
 <211> 145  
 <212> PRT  
 <213> Homo sapiens

<400> 2588  
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```

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Ser Gln Leu Glu Ala Gln Gly Ala Gly Asp Arg Met Asp Glu Val Met
      20           25           30
Lys Glu Val Pro Arg Val Arg Lys Asp Ala Gly Tyr Pro Pro Leu Val
      35           40           45
Thr Pro Ser Ser Gln Ile Val Gly Thr Gln Ala Val Phe Asn Val Leu
      50           55           60
Met Gly Asn Gly Ser Tyr Lys Asn Leu Thr Ala Glu Phe Ala Asp Leu
      65           70           75           80
Met Leu Gly Tyr Tyr Gly Lys Pro Ile Gly Glu Leu Asn Pro Glu Ile
      85           90           95
Val Glu Met Ala Lys Lys Gln Thr Gly Lys Glu Pro Ile Asp Cys Arg
      100          105          110
Pro Ala Asp Leu Leu Glu Pro Glu Trp Asp Gln Leu Val Glu Gln Ala
      115          120          125
Lys Ser Leu Glu Gly Phe Asp Gly Ser Asp Glu Asp Val Leu Thr Asn
      130          135          140
Ala
145

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<210> 2589  
 <211> 366  
 <212> DNA  
 <213> Homo sapiens

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<400> 2589
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120
gaggtcgctcg gcacgtcga ggtcatggag caggcctact gggcgggcgcg acgcggcgcc
180
acgatcgtct acgtcggggc gctgggcatc gacgccaagc tggctcctgcc ggcgaacgac
240
ctgcacggcg gcgccaagac gatcatcggc tgcgccaacg gattggggcg agtgcgccacc
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360
acgcgt
366

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<210> 2590  
 <211> 122  
 <212> PRT  
 <213> Homo sapiens

```

<400> 2590
Pro Ala Lys Lys Asp Met Ala Met Val Phe Gly Ala Thr His Tyr Val
1           5           10           15
Asp Pro Thr Ala Gly Asp Pro Val Glu Gln Ile Arg Ala Leu Thr Arg
      20           25           30
Gly Arg Gly Val Asp Phe Ala Ile Glu Val Val Gly Ile Val Glu Val
      35           40           45
Met Glu Gln Ala Tyr Trp Ala Ala Arg Arg Gly Gly Thr Ile Val Tyr

```



```

      50              55              60
Val Gly Ala Leu Gly Ile Asp Ala Lys Leu Val Leu Pro Ala Asn Asp
65              70              75              80
Leu His Gly Gly Ala Lys Thr Ile Ile Gly Cys Ala Asn Gly Leu Gly
      85              90              95
Ala Val Arg Thr Asp Tyr Ala Lys Met Ile Ser Leu Val Glu Thr Gly
      100             105             110
Arg Leu Asp Leu Gly Gly Met Ile Thr Arg
      115             120

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<210> 2591  
 <211> 341  
 <212> DNA  
 <213> Homo sapiens

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<400> 2591
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60
agcagccac gagttgtcca gcaccaggcc aggggtcagt cagcaatgag gacagctcct
120
tctgtctcca gggcaggccc tgggcagggc aatgctgggg acacgggtggg gagtaggcca
180
cagcttctgt gggggagtgc ctatggcagg aggatcatgc ccagcagcgt ggaagagcaa
240
gggggtgaccc tgcactcgag gctcctggga agacggggag gggttgaggtt acatgagggg
300
gaggggtcag ttggtgcatt cacagaacag cagggtgaggc a
341

```

<210> 2592  
 <211> 109  
 <212> PRT  
 <213> Homo sapiens

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<400> 2592
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1      5      10      15
Ser Ser Pro Arg Val Val Gln His Gln Ala Arg Gly Gln Ser Ala Met
20      25      30
Arg Thr Ala Pro Ser Cys Ser Arg Ala Gly Pro Gly Gln Gly Asn Ala
35      40      45
Gly Asp Thr Val Gly Ser Arg Pro Gln Leu Leu Trp Gly Ser Ser Tyr
50      55      60
Gly Arg Arg Ile Met Pro Ser Ser Val Glu Glu Gln Gly Val Thr Leu
65      70      75      80
His Ser Arg Leu Leu Gly Arg Arg Gly Gly Leu Arg Leu His Glu Gly
85      90      95
Glu Gly Ser Val Gly Ala Phe Thr Glu Gln Gln Gly Gly
100     105

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<210> 2593  
 <211> 501  
 <212> DNA  
 <213> Homo sapiens

&lt;400&gt; 2593

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 120  
 ttggcgcgcc aagcggatga agcgggggat tatatgactt atattgtgtc ttcggacctc  
 180  
 gatatgctgc aaatcgtaga tgaaaacacc aagatgtatc gaattctgcg gggattttcg  
 240  
 gatctcgagg agatggatac tccagcgatt gaagaaaaat atggaatctt gaagtcgcaa  
 300  
 tttttggacc tgaaggcgct gaagggggat aattcggata atattccagg cgtaccaggg  
 360  
 attggtgaga aaaccgcagt gaaactcttg aatgagtatg gtagcttgga ggggatttat  
 420  
 aatcatatca aggaaatttc gggggcgaca cagaagaaat tgattgctgg acgcgaatca  
 480  
 gctgagatgt ctcttaagct t  
 501

&lt;210&gt; 2594

&lt;211&gt; 167

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2594

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Val | Arg | Pro | Pro | Glu | Asp | Phe | Tyr | Ala | Gln | Ile | Pro | Leu | Leu | Arg |
| 1   |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Glu | Leu | Ile | Ser | Ala | Leu | Ser | Trp | Gly | Phe | Met | Glu | Val | Asp | Glu | Tyr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     | 30  |     |     |     |
| Glu | Ala | Asp | Asp | Ile | Ile | Gly | Thr | Leu | Ala | Arg | Gln | Ala | Asp | Glu | Ala |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Gly | Asp | Tyr | Met | Thr | Tyr | Ile | Val | Ser | Ser | Asp | Leu | Asp | Met | Leu | Gln |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Ile | Val | Asp | Glu | Asn | Thr | Lys | Met | Tyr | Arg | Ile | Leu | Arg | Gly | Phe | Ser |
| 65  |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |     |
| Asp | Leu | Glu | Glu | Met | Asp | Thr | Pro | Ala | Ile | Glu | Glu | Lys | Tyr | Gly | Ile |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Leu | Lys | Ser | Gln | Phe | Leu | Asp | Leu | Lys | Ala | Leu | Lys | Gly | Asp | Asn | Ser |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Asp | Asn | Ile | Pro | Gly | Val | Pro | Gly | Ile | Gly | Glu | Lys | Thr | Ala | Val | Lys |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Leu | Leu | Asn | Glu | Tyr | Gly | Ser | Leu | Glu | Gly | Ile | Tyr | Asn | His | Ile | Lys |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Glu | Ile | Ser | Gly | Ala | Thr | Gln | Lys | Lys | Leu | Ile | Ala | Gly | Arg | Glu | Ser |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Ala | Glu | Met | Ser | Leu | Lys | Leu |     |     |     |     |     |     |     |     |     |
|     |     |     |     |     | 165 |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 2595

&lt;211&gt; 928

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2595

agatcttcca gatgcaacaa tgatcaatta agacacgagg cgacatgggtg gcccctgcct  
 60  
 cccccccag ggatacctgt aatacctgct tcccacttca tgggctacaa tctcatgctg  
 120  
 gtcacaattt ctggggctca ctcatataac accaacaacat gggatatttg tgaagaactt  
 180  
 cgcctgaggg agcttgaaga agtcaaggcc agagctgctc agatggaaaa gaccatgcgg  
 240  
 tgggtggctgg actgcactgc caactggaga gaaaaatgga gtaaagttcg agctgaaagg  
 300  
 aacagtgcgg gaaaggaagg aagacaactc agaataaaac tagagatggc gatgaaagaa  
 360  
 tcggatccac tgaacagaa acagagtttg ccacttcaga aggaggcatt agaagctaata  
 420  
 gttacccagg atctgaagct tcttggtctc gtagaagaat cctgtgaaca tacagaccaa  
 480  
 tttcaattga gttcacaaat gcatgagtct atcagagagt atttggtaaa aagacaattt  
 540  
 tctacaaagg aggacacaaa taataaggaa caagggtggg ttattgattc tctaaaatta  
 600  
 agtgaggaga tgaagcccaa tctagatggg gttgatttat tcaacaatgg tgggtctgga  
 660  
 aacggtgaaa cgaaaactgg gctgagactg aaagcaataa atctgccttt ggaaaatgaa  
 720  
 gtaactgaaa tttcagcttt gcagggtgat ttggatgaat tccaaaaaat cttatggaag  
 780  
 gaaagagaaa tgcgcacagc tttggaaaaa gaaatagaga gactggagtc ggctttgtct  
 840  
 ctgtggaagt ggaagtatga agaactgaaa gaatcaaagc caaaaatgt gaaagagttt  
 900  
 gacattcttc ttggtcaaca taatgatg  
 928

&lt;210&gt; 2596

&lt;211&gt; 309

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2596

Arg Ser Ser Arg Cys Asn Asn Asp Gln Leu Arg His Ala Ala Thr Trp  
 1 5 10 15  
 Trp Pro Leu Pro His Pro Pro Gly Ile Pro Val Ile Pro Ala Ser His  
 20 25 30  
 Phe Met Gly Tyr Asn Leu Met Leu Val Thr Ile Ser Gly Ala His Ser  
 35 40 45  
 Tyr Asn Thr Asn Lys Trp Asp Ile Cys Glu Glu Leu Arg Leu Arg Glu  
 50 55 60  
 Leu Glu Glu Val Lys Ala Arg Ala Ala Gln Met Glu Lys Thr Met Arg  
 65 70 75 80  
 Trp Trp Ser Asp Cys Thr Ala Asn Trp Arg Glu Lys Trp Ser Lys Val  
 85 90 95  
 Arg Ala Glu Arg Asn Ser Ala Gly Lys Glu Gly Arg Gln Leu Arg Ile

100 105 110  
 Lys Leu Glu Met Ala Met Lys Glu Ser Asp Pro Leu Lys Gln Lys Gln  
 115 120 125  
 Ser Leu Pro Leu Gln Lys Glu Ala Leu Glu Ala Asn Val Thr Gln Asp  
 130 135 140  
 Leu Lys Leu Pro Gly Phe Val Glu Glu Ser Cys Glu His Thr Asp Gln  
 145 150 155 160  
 Phe Gln Leu Ser Ser Gln Met His Glu Ser Ile Arg Glu Tyr Leu Val  
 165 170 175  
 Lys Arg Gln Phe Ser Thr Lys Glu Asp Thr Asn Asn Lys Glu Gln Gly  
 180 185 190  
 Val Val Ile Asp Ser Leu Lys Leu Ser Glu Glu Met Lys Pro Asn Leu  
 195 200 205  
 Asp Gly Val Asp Leu Phe Asn Asn Gly Gly Ser Gly Asn Gly Glu Thr  
 210 215 220  
 Lys Thr Gly Leu Arg Leu Lys Ala Ile Asn Leu Pro Leu Glu Asn Glu  
 225 230 235 240  
 Val Thr Glu Ile Ser Ala Leu Gln Val His Leu Asp Glu Phe Gln Lys  
 245 250 255  
 Ile Leu Trp Lys Glu Arg Glu Met Arg Thr Ala Leu Glu Lys Glu Ile  
 260 265 270  
 Glu Arg Leu Glu Ser Ala Leu Ser Leu Trp Lys Trp Lys Tyr Glu Glu  
 275 280 285  
 Leu Lys Glu Ser Lys Pro Lys Asn Val Lys Glu Phe Asp Ile Leu Leu  
 290 295 300  
 Gly Gln His Asn Asp  
 305

&lt;210&gt; 2597

&lt;211&gt; 631

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2597

ccatgggtgg gaatgcaaga gacacactct agacttacta gaggagcaag agcaggactt  
 60  
 ggctgcacct gcagctgagg gttagcagga attaggagat aacagtagaa tagggctaga  
 120  
 ctgaaaaggc ctttgatgcc aggttaggaa atttacattt tatccacaaa atccaaatcc  
 180  
 tcctttaata atgagatgtc ttacaagtt ttgggcaag agtggtatgg ctgacctggt  
 240  
 gtcctgggaa ggaactgtgt ggggatggtg tgcaggactt acctagggtg ggaaaggcac  
 300  
 aagcagcatg gggctgtggc agctaccaga ggtaaaggga catttcaggg aaagacttgg  
 360  
 caggacaaga ccttccttgg atggatggat gaataccaga aacagggacc caagagaaa  
 420  
 gccgagtttc ataggagag aagatgggtc atgtatgagg catgttgagc ttgtactgat  
 480  
 ggtgagacgt ccagtcgaca gtactacca ctggccagtg agaaatgtgg gaccagggtt  
 540  
 caggaggaaa ctggggccgg aaatgagcat ttggaaggcg ccagggtgga agcgggtggt  
 600

tcactccacg agtgctatatt cacttacgcg t  
631

<210> 2598  
<211> 108  
<212> PRT  
<213> Homo sapiens

<400> 2598  
Met Gly Leu Trp Gln Leu Pro Glu Val Lys Gly His Phe Arg Glu Arg  
1 5 10 15  
Leu Gly Arg Thr Arg Pro Ser Leu Asp Gly Trp Met Asn Thr Arg Asn  
20 25 30  
Arg Asp Pro Arg Glu Arg Pro Ser Phe Ile Gly Arg Glu Asp Gly Ser  
35 40 45  
Cys Met Arg His Val Glu Leu Val Leu Met Val Arg Arg Pro Val Asp  
50 55 60  
Ser Thr Thr His Trp Pro Val Arg Asn Val Gly Pro Gly Phe Arg Arg  
65 70 75 80  
Lys Leu Gly Pro Glu Met Ser Ile Trp Lys Ala Pro Gly Trp Lys Arg  
85 90 95  
Val Val His Ser Thr Ser Ala Ile Ser Leu Thr Arg  
100 105

<210> 2599  
<211> 356  
<212> DNA  
<213> Homo sapiens

<400> 2599  
nagatcttat acagggacgt gatgttggag aactactgga accttggttc tctgggactg  
60  
tgtcattttg atatgaatat tatctccatg ttggaggaag ggaaagagcc ctggactgtg  
120  
aagagctgtg tgaaaatagc aagaaaacca agaacgcggg aatgtgtcaa aggcgtggtc  
180  
acagatatcc ctctaaatg tacaatcaag gatttgctac caaaagagaa gagcagtaca  
240  
gaagcagtat tccacacagt ggtgttgga agacacgaaa gccctgacat tgaagacttt  
300  
tccttcaagg aaccccgaa aaatgtgcat gattttgagt gtcaatggag agatgn  
356

<210> 2600  
<211> 118  
<212> PRT  
<213> Homo sapiens

<400> 2600  
Xaa Ile Leu Tyr Arg Asp Val Met Leu Glu Asn Tyr Trp Asn Leu Val  
1 5 10 15  
Ser Leu Gly Leu Cys His Phe Asp Met Asn Ile Ile Ser Met Leu Glu  
20 25 30  
Glu Gly Lys Glu Pro Trp Thr Val Lys Ser Cys Val Lys Ile Ala Arg

```

      35              40              45
Lys Pro Arg Thr Arg Glu Cys Val Lys Gly Val Val Thr Asp Ile Pro
      50              55              60
Pro Lys Cys Thr Ile Lys Asp Leu Leu Pro Lys Glu Lys Ser Ser Thr
65              70              75              80
Glu Ala Val Phe His Thr Val Val Leu Glu Arg His Glu Ser Pro Asp
      85              90              95
Ile Glu Asp Phe Ser Phe Lys Glu Pro Gln Lys Asn Val His Asp Phe
      100              105              110
Glu Cys Gln Trp Arg Asp
      115

```

&lt;210&gt; 2601

&lt;211&gt; 329

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2601

```

gcgccgatca tgatctacgg cgacgacgtc acccacctgc tcaccgaaga aggcacgccc
60
tacttgatca aggcgcgttc cctggaagag cgccaagcga tgatcgccgg cggtgggtggg
120
gtcaccgcct tcggcttgcg ccacaacccc aaggacactg cgcgcatgcg ccgcgaaggc
180
ttgatcgctt tgcccgaaga cctcggtatc cgccgcaccg acgccacccg cgaactgttg
240
gccgccaaga gcgtggccga cctgggtggag tggtcgggtg gcttgtgcaa cccgcccggc
300
aagttcagga gctggtaaat gcgcgccct
329

```

&lt;210&gt; 2602

&lt;211&gt; 105

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2602

```

Ala Pro Ile Met Ile Tyr Gly Asp Asp Val Thr His Leu Leu Thr Glu
1              5              10              15
Glu Gly Ile Ala Tyr Leu Tyr Lys Ala Arg Ser Leu Glu Glu Arg Gln
      20              25              30
Ala Met Ile Ala Gly Gly Gly Gly Val Thr Ala Phe Gly Leu Arg His
      35              40              45
Asn Pro Lys Asp Thr Ala Arg Met Arg Arg Glu Gly Leu Ile Ala Leu
      50              55              60
Pro Glu Asp Leu Gly Ile Arg Arg Thr Asp Ala Thr Arg Glu Leu Leu
65              70              75              80
Ala Ala Lys Ser Val Ala Asp Leu Val Glu Trp Ser Gly Gly Leu Cys
      85              90              95
Asn Pro Pro Ala Lys Phe Arg Ser Trp
      100              105

```

&lt;210&gt; 2603

&lt;211&gt; 423

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2603

tcatgatcca ttgctctacc ctttacggtt gtgcacctac gcccaggctg gtggtcagga  
 60  
 gcatcggttc ggtggtaccg aggtcgagga cttccttcac gccgttggtc gcggagggca  
 120  
 ggttgtggta agtggtcagg tgggccacga tctgggcact gatcacctcg gtgaaatcga  
 180  
 agctctgggt accctgagcg gtcgccgaca cgacacggtc cacaccggag accagaccga  
 240  
 tctcggagat gatcgcgtaa ctttcattgt cgtagaggat cttgcacgca tcgatgatgc  
 300  
 gcttgatctc cttggcagtg aagatgattt ccatcggggg gttggccgac agatactgac  
 360  
 cggagctggt ggtcacctgg gtggaatcca ggtcatccgg aaccgggttc aggttgtccg  
 420  
 cgg  
 423

&lt;210&gt; 2604

&lt;211&gt; 103

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2604

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Glu | Ile | Ile | Phe | Thr | Ala | Lys | Glu | Ile | Lys | Arg | Ile | Ile | Asp | Ala |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Cys | Lys | Ile | Leu | Tyr | Asp | Asn | Glu | Gly | Tyr | Ala | Ile | Ile | Ser | Glu | Ile |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gly | Leu | Val | Ser | Gly | Val | Asp | Arg | Val | Val | Ser | Ala | Thr | Ala | Gln | Gly |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Asn | Gln | Ser | Phe | Asp | Phe | Thr | Glu | Val | Ile | Ser | Ala | Gln | Ile | Val | Ala |
|     |     |     | 50  |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| His | Leu | Thr | Thr | Tyr | His | Asn | Leu | Pro | Ser | Ala | Asn | Asn | Gly | Val | Lys |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Glu | Val | Leu | Asp | Leu | Gly | Thr | Thr | Glu | Pro | Met | Leu | Leu | Thr | Thr | Asp |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Leu | Gly | Val | Gly | Ala | Gln | Pro |     |     |     |     |     |     |     |     |     |
|     |     |     | 100 |     |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 2605

&lt;211&gt; 354

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2605

ngggaggagg ggcattgtcaa aagcgactgt atccagaggg tttgatttaa acatttttca  
 60  
 aaacatatgt ggcaaacagc ggggggaggg gatctcacca acgtttttct ccatttcttc  
 120  
 tttgcatgct gggacctgtt ccattttcaa aatgtgtcat tttggaagga aagggaggaa  
 180

caactacttg aaaggaatac acgtcagtat gagccctttc tcctcagcag aaggttgccc  
 240  
 caaagtacct cctctgaggg gagagaaagg agagaggagg agagacagct ttcacaaat  
 300  
 ggggcaccca ggactctagg gagagaggca cgttctcaca aaggcccttt gagc  
 354

<210> 2606  
 <211> 101  
 <212> PRT  
 <213> Homo sapiens

<400> 2606  
 Met Ser Lys Ala Thr Val Ser Arg Gly Phe Asp Leu Asn Ile Phe Gln  
 1 5 10 15  
 Asn Ile Cys Gly Lys Gln Arg Gly Glu Gly Ile Ser Pro Thr Phe Phe  
 20 25 30  
 Ser Thr Ser Ser Leu His Ala Gly Thr Cys Ser Thr Phe Lys Met Cys  
 35 40 45  
 His Phe Gly Arg Lys Gly Arg Asn Asn Tyr Leu Lys Gly Ile His Val  
 50 55 60  
 Ser Met Ser Pro Phe Ser Ser Ala Glu Gly Cys Pro Lys Val Pro Pro  
 65 70 75 80  
 Leu Arg Arg Glu Lys Gly Glu Arg Arg Arg Asp Ser Phe His Gln Met  
 85 90 95  
 Gly His Pro Gly Leu  
 100

<210> 2607  
 <211> 297  
 <212> DNA  
 <213> Homo sapiens

<400> 2607  
 tgatcaagaa caatgatacg atatcctaac caacagagga agcaacggaa gttgttggtg  
 60  
 tttttatgct gttttttttt ttgagaacg gatcttgccc ctgccccag gccggaatgg  
 120  
 atgacatgga cagaaccccg tcggaaaaaa gccggaatgt gcaaacccaa attcccacca  
 180  
 cacggggggc ctaacaattg gatccatccc cnaaaaaanc cntnncaaaa aaagntaaaa  
 240  
 actttttttt ttttaaannn anacccccaa aaaaaccaa aaaaaaatt taaaaaa  
 297

<210> 2608  
 <211> 95  
 <212> PRT  
 <213> Homo sapiens

<400> 2608  
 Met Ile Arg Tyr Pro Asn Gln Gln Arg Lys Gln Arg Lys Leu Leu Leu  
 1 5 10 15  
 Phe Leu Cys Cys Phe Phe Phe Leu Arg Thr Asp Leu Ala Pro Ala Pro



```
<210> 2611
<211> 342
<212> DNA
<213> Homo sapiens
```

<400> 2611  
 gccgccgcga tcgacggcga ctccctcgacc agctgggtgt ccagctcgct gcaaaccgct  
 60  
 gtggggcaat ggcttcaggt ggacttcgac catccgggtga ccaacgcgac catcaccttg  
 120  
 acgcccagcg ccaccgctgt cggagctcag gtgcgcgcgcg tcgaggtggc aacagccaac  
 180  
 ggcaccagca caattcgctt cgaccagccc ggcaagccgc tgacggcggc gctgccctac  
 240  
 ggcgagacct catgggtccg gttcaccgcg accggcaccg acgacggctc ccccggcgtg  
 300  
 cagttcggca tcaccgactt ctccgtgacg cagtacgacg cg  
 342

<210> 2612  
 <211> 114  
 <212> PRT  
 <213> Homo sapiens

<400> 2612  
 Ala Ala Ala Ile Asp Gly Asp Ser Ser Thr Ser Trp Val Ser Ser Ser  
 1 5 10 15  
 Leu Gln Thr Ala Val Gly Gln Trp Leu Gln Val Asp Phe Asp His Pro  
 20 25 30  
 Val Thr Asn Ala Thr Ile Thr Leu Thr Pro Ser Ala Thr Ala Val Gly  
 35 40 45  
 Ala Gln Val Arg Arg Val Glu Val Ala Thr Ala Asn Gly Thr Ser Thr  
 50 55 60  
 Ile Arg Phe Asp Gln Pro Gly Lys Pro Leu Thr Ala Ala Leu Pro Tyr  
 65 70 75 80  
 Gly Glu Thr Ser Trp Val Arg Phe Thr Ala Thr Gly Thr Asp Asp Gly  
 85 90 95  
 Ser Pro Gly Val Gln Phe Gly Ile Thr Asp Phe Ser Val Thr Gln Tyr  
 100 105 110  
 Asp Ala

<210> 2613  
 <211> 414  
 <212> DNA  
 <213> Homo sapiens

<400> 2613  
 acgcgtgtgg gttgtgcaca gggcatggct gctctggaca ggcctgggccc ctgggcatca  
 60  
 ttctctcctt ccaaaagggtg agggctctgac ctaatggtac tttgtctgat gttttccaga  
 120  
 tatgcccta ctgggaaggc ccaagtgggc aggcagagtc tggggtggag cgaggtgggg  
 180  
 ctgggaagca ctctgcttt tctgtgccc cagaacgaat gcaagttctg gcagcttctc  
 240  
 ctctctctgg gaggaggaaa ggagggtcgc cctccaggtc tcaggctgag ggagtgggct  
 300

ggagaccctc tagatggcca gcagaggtcg gcctctgtga gaaggcttcc ttgcgtgact  
 360  
 ctggggccccc tcccaggtc tcctcgtggc aggcaggac ttgggccagc atgg  
 414

<210> 2614  
 <211> 107  
 <212> PRT  
 <213> Homo sapiens

<400> 2614  
 Met Val Leu Cys Leu Met Phe Ser Arg Tyr Ala Pro Thr Gly Lys Gly  
 1 5 10 15  
 Gln Val Gly Arg Gln Ser Leu Gly Trp Ser Glu Val Gly Leu Gly Ser  
 20 25 30  
 Thr Pro Ala Phe Leu Leu Pro Gln Asn Glu Cys Lys Phe Trp Gln Leu  
 35 40 45  
 Leu Leu Leu Leu Gly Gly Gly Lys Glu Gly Ser Pro Pro Gly Leu Arg  
 50 55 60  
 Leu Arg Glu Trp Ala Gly Asp Pro Leu Asp Gly Gln Gln Arg Leu Ala  
 65 70 75 80  
 Ser Val Arg Arg Leu Pro Cys Val Thr Leu Gly Pro Leu Pro Gly Ser  
 85 90 95  
 Pro Arg Gly Arg Gln Gly Leu Gly Pro Ala Trp  
 100 105

<210> 2615  
 <211> 394  
 <212> DNA  
 <213> Homo sapiens

<400> 2615  
 nnngccgccc cctcggccc cagcgcgctt cttttgcgc ncgacgtcag ccagaaggcg  
 60  
 gacgtcgacg ccattgctgaa ggaaacgctg gccagttcg gccacatcga taccctcgtc  
 120  
 aacaatgcgg gcgtcacgca tgcggccgat ttcctcgacg tgtgcgaaga cgatttcgac  
 180  
 cgggtcatgc gcattaacct gaaatcgatg ttcctgtgcg gccaggccgc ggcgcgcgag  
 240  
 atggtcaagc gcaacagcgg ctgcatcatc aacatgtcca gcgtgaatgc ggaactggcc  
 300  
 attccgaacc agtgccgta cgtggtgtcg aaaggcgcca tcaaccagct gaccaaggtc  
 360  
 atggccttga acctggcgcc gcacggtgcg cgct  
 394

<210> 2616  
 <211> 131  
 <212> PRT  
 <213> Homo sapiens

<400> 2616  
 Xaa Ala Ala Ala Leu Gly Arg Ser Ala Leu Leu Leu Arg Xaa Asp Val

```

      1             5             10             15
Ser Gln Lys Ala Asp Val Asp Ala Met Leu Lys Glu Thr Leu Ala Gln
      20             25             30
Phe Gly His Ile Asp Ile Leu Val Asn Asn Ala Gly Val Thr His Ala
      35             40             45
Ala Asp Phe Leu Asp Val Cys Glu Asp Asp Phe Asp Arg Val Met Arg
      50             55             60
Ile Asn Leu Lys Ser Met Phe Leu Cys Gly Gln Ala Ala Ala Arg Glu
      65             70             75             80
Met Val Lys Arg Asn Ser Gly Cys Ile Ile Asn Met Ser Ser Val Asn
      85             90             95
Ala Glu Leu Ala Ile Pro Asn Gln Val Pro Tyr Val Val Ser Lys Gly
      100            105            110
Ala Ile Asn Gln Leu Thr Lys Val Met Ala Leu Asn Leu Ala Pro His
      115            120            125
Gly Ala Arg
      130

```

<210> 2617  
 <211> 513  
 <212> DNA  
 <213> Homo sapiens

```

<400> 2617
naccggttg catcatgctc acagcactgg gggttccctt ctttcttttc ctccctcagaa
60
agacattgtg agatgggaaa tatcatggaa acacctatac tttccggctc ccacttgaac
120
gtcaccttgg gaaatcacia gattctcaat gacgtctccg tatcattcca agcgggagtt
180
atgcacgccca tacttgcccc caacggttct gggaagacca ccttggtacg cacgttatgc
240
ggagccctct ccccgagtc ggggagcgtc aaattcgatg gaacggatct atccacgatg
300
tcgcacctct gtatcgcgcg tcgtattgcg atcgtctggc agagcgcgac cgctccctct
360
gacctaccg tacgtcacct cggtggctac ggagatatg cccacacacc gtggtggcag
420
ataagggaca ccagcgccga cagccatgtg gaacaagcaa tggagctggc cgatgtcacg
480
tgcttcgccc atcgacgcgt caccactctc tca
513

```

<210> 2618  
 <211> 171  
 <212> PRT  
 <213> Homo sapiens

```

<400> 2618
Xaa Arg Leu Ala Ser Cys Ser Gln His Trp Gly Phe Pro Ser Phe Phe
1             5             10             15
Ser Ser Ser Glu Arg His Cys Glu Met Gly Asn Ile Met Glu Thr Pro
      20             25             30
Ile Leu Ser Gly Ser His Leu Asn Val Thr Leu Gly Asn His Lys Ile

```

```

      35      40      45
Leu Asn Asp Val Ser Val Ser Phe Gln Ala Gly Val Met His Ala Ile
  50      55      60
Leu Gly Pro Asn Gly Ser Gly Lys Thr Thr Leu Val Arg Thr Leu Cys
  65      70      75      80
Gly Ala Leu Ser Pro Glu Ser Gly Ser Val Lys Phe Asp Gly Thr Asp
      85      90      95
Leu Ser Thr Met Ser Ala Ser Cys Ile Ala Arg Arg Ile Ala Ile Val
      100      105      110
Trp Gln Ser Ala Thr Ala Pro Ser Asp Leu Thr Val Arg His Leu Val
      115      120      125
Gly Tyr Gly Arg Tyr Ala His Thr Pro Trp Trp Gln Ile Arg Asp Thr
      130      135      140
Ser Ala Asp Ser His Val Glu Gln Ala Met Glu Leu Ala Asp Val Thr
      145      150      155      160
Cys Phe Ala Asp Arg Arg Val Thr Thr Leu Ser
      165      170

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<210> 2619  
 <211> 348  
 <212> DNA  
 <213> Homo sapiens

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<400> 2619
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120
cagcacgtca ttttccttga taacggctgt accgacgtgc ttgccgacac ccttggtcgc
180
gaagtgttgc ggtgcatccg gtgtgcttcg tgtatcaata tctgcccggt ttacgagcgg
240
gcgggcggtc acccttacgg ctccgtgtac cccggggcca ttggtgcggt gctcaatccg
300
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348

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<210> 2620  
 <211> 116  
 <212> PRT  
 <213> Homo sapiens

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<400> 2620
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Ala Xaa Gly Glu Arg Met Asn Pro Tyr Asn Ser Val Trp Ser Gly Val
      20      25      30
Thr Asp Gly Asp Gly Pro Gln Glu Gln His Val Ile Phe Leu Asp Asn
      35      40      45
Gly Arg Thr Asp Val Leu Ala Asp Thr Leu Gly Arg Glu Val Leu Arg
      50      55      60
Cys Ile Arg Cys Ala Ser Cys Ile Asn Ile Cys Pro Val Tyr Glu Arg
      65      70      75      80
Ala Gly Gly His Pro Tyr Gly Ser Val Tyr Pro Gly Pro Ile Gly Ala

```

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     | 85  |     | 90  |     | 95  |     |     |     |     |     |     |     |     |     |     |
| Val | Leu | Asn | Pro | Gln | Leu | Arg | Gly | Val | Glu | His | Pro | Val | Asp | Arg | Gly |
|     |     | 100 |     |     |     |     | 105 |     |     |     |     |     | 110 |     |     |
| Leu | Pro | Tyr | Ala |     |     |     |     |     |     |     |     |     |     |     |     |
|     |     | 115 |     |     |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 2621

&lt;211&gt; 1485

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2621

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acgcgtgcag gtaaaccaga ggccgtgtga ccagctcagt gctggtttac ggaacaactc
60
ttacttttaa aaattacttg ttccccaaa ttgttgagtg ccgccgtttg gtttcctatg
120
ttttctttcc ctgttttgat tttgctgaag ggagagggtg tggtgggttag gatcagagct
180
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240
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300
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360
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420
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480
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540
atatgaaaag gccagaagga ggagcaaggg ctgttttctg gagtgggtga ggtgtgtg
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1140
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attaaatcac agttcagatg aaactgaata tcattgtaat aatctcataa tatatatttg
1260

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 1320  
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 1380  
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<210> 2622

<211> 83

<212> PRT

<213> Homo sapiens

<400> 2622

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Phe | Ser | Phe | Pro | Val | Leu | Ile | Leu | Leu | Lys | Gly | Glu | Val | Val | Val |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Val | Arg | Ile | Arg | Ala | Leu | Leu | Ala | Ser | Val | Gly | Arg | Ile | Cys | Trp | Trp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Trp | Leu | Arg | Ala | His | Ala | Gln | Thr | His | Ser | Leu | Pro | Arg | Leu | Ser | Lys |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |
| Ala | Ser | Pro | Ser | Pro | Leu | Leu | Val | Gly | Gly | Ala | Arg | Val | Leu | Leu | Gly |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Arg | Leu | Leu | Glu | Gly | Arg | Phe | Ser | Glu | Leu | Gln | Gly | Gln | Gly | Glu | Gln |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Leu | Lys | Gly |     |     |     |     |     |     |     |     |     |     |     |     |     |

<210> 2623

<211> 3524

<212> DNA

<213> Homo sapiens

<400> 2623

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 120  
 agtgggttcc tgagtggcgg cggaggtacc ggcagtagcg gtggtagcgg ctccggcggc  
 180  
 ggtggtagtg gcggcgcgcg cggcgcgcggc agcagcggca ggagggcaga gatggaaccc  
 240  
 acctttcccc aggtatggt tatgttcaac caccgtcttc ccccggtcac cagcttcacc  
 300  
 cggccggcgg ggtcgccgc ccctcccccg caatgcgtgt tatectctc tacctccgca  
 360  
 gccccggcgg ctgagcccc ccctccgcca gccccggaca tgactttcaa gaaggagccg  
 420  
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 480  
 gttagcatca aacaggagaa acccgcgat cctgaggagc agcagtccca ccaccacat  
 540  
 caccaccacc actatggggg gctgttcgct ggagctgaag agaggtctcc aggcctagga  
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ggagaaagac ctttccagtg cagccagtgt agtatgggtt tcattcagaa atacctacta  
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2220



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 3180  
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 3240  
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 3360  
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 3524

&lt;210&gt; 2624

&lt;211&gt; 895

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2624

Met Lys Ile Gly Ser Gly Phe Leu Ser Gly Gly Gly Gly Thr Gly Ser  
 1 5 10 15  
 Ser Gly Gly Ser Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Gly

**1867**

450                      455                      460  
 Leu Ile Phe Lys Lys Gly Ser Arg Lys Asn Thr Asp Lys Asn Tyr Leu  
 470                      475                      480  
 Asn Phe Val Ser Pro Leu Pro Asp Ile Val Gly Gln Lys Ser Leu Ser  
                     485                      490                      495  
 Gly Lys Pro Ser Gly Ser Leu Gly Ile Val Ser Asn Asn Ser Val Glu  
                     500                      505                      510  
 Thr Ile Gly Leu Leu Gln Ser Thr Ser Gly Lys Gln Gly Gln Ile Ser  
                     515                      520                      525  
 Ser Asn Tyr Asp Asp Ala Met Gln Phe Ser Lys Lys Arg Arg Tyr Leu  
                     530                      535                      540  
 Pro Thr Ala Ser Ser Asn Ser Ala Phe Ser Ile Asn Val Gly His Met  
 545                      550                      555                      560  
 Val Ser Gln Gln Ser Val Ile Gln Ser Ala Gly Val Ser Val Leu Asp  
                     565                      570                      575  
 Asn Glu Ala Pro Leu Ser Leu Ile Asp Ser Ser Ala Leu Asn Ala Glu  
                     580                      585                      590  
 Ile Lys Ser Cys His Asp Lys Ser Gly Ile Pro Asp Glu Val Leu Gln  
                     595                      600                      605  
 Ser Ile Leu Asp Gln Tyr Ser Asn Lys Ser Glu Ser Gln Lys Glu Asp  
                     610                      615                      620  
 Pro Phe Asn Ile Ala Glu Pro Arg Val Asp Leu His Thr Ser Gly Glu  
 625                      630                      635                      640  
 His Ser Glu Leu Val Gln Glu Glu Asn Leu Ser Pro Gly Thr Gln Thr  
                     645                      650                      655  
 Pro Ser Asn Asp Lys Ala Ser Met Leu Gln Glu Tyr Ser Lys Tyr Leu  
                     660                      665                      670  
 Gln Gln Ala Phe Glu Lys Ser Thr Asn Ala Ser Phe Thr Leu Gly His  
                     675                      680                      685  
 Gly Phe Gln Phe Val Ser Leu Ser Ser Pro Leu His Asn His Thr Leu  
                     690                      695                      700  
 Phe Pro Glu Lys Gln Ile Tyr Thr Thr Ser Pro Leu Glu Cys Gly Phe  
 705                      710                      715                      720  
 Gly Gln Ser Val Thr Ser Val Leu Pro Ser Ser Leu Pro Lys Pro Pro  
                     725                      730                      735  
 Phe Gly Met Leu Phe Gly Ser Gln Pro Gly Leu Tyr Leu Ser Ala Leu  
                     740                      745                      750  
 Asp Ala Thr His Gln Gln Leu Thr Pro Ser Gln Glu Leu Asp Asp Leu  
                     755                      760                      765  
 Ile Asp Ser Gln Lys Asn Leu Glu Thr Ser Ser Ala Phe Gln Ser Ser  
                     770                      775                      780  
 Ser Gln Lys Leu Thr Ser Gln Lys Glu Gln Lys Asn Leu Glu Ser Ser  
 785                      790                      795                      800  
 Thr Gly Phe Gln Ile Pro Ser Gln Glu Leu Ala Ser Gln Ile Asp Pro  
                     805                      810                      815  
 Gln Lys Asp Ile Glu Pro Arg Thr Thr Tyr Gln Ile Glu Asn Phe Ala  
                     820                      825                      830  
 Gln Ala Phe Gly Ser Gln Phe Lys Ser Gly Ser Arg Val Pro Met Thr  
                     835                      840                      845  
 Phe Ile Thr Asn Ser Asn Gly Glu Val Asp His Arg Val Arg Thr Ser  
                     850                      855                      860  
 Val Ser Asp Phe Ser Gly Tyr Thr Asn Met Met Ser Asp Val Ser Glu  
 865                      870                      875                      880  
 Pro Cys Ser Thr Arg Val Lys Thr Pro Thr Ser Gln Ser Tyr Arg

885

890

895

&lt;210&gt; 2625

&lt;211&gt; 1398

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2625

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120
ttgtgggaag tatagggcgg caagcggagg aggcgtggcg agcggatcat ccgcttccgg
180
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1380

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1398

<210> 2626  
<211> 137  
<212> PRT  
<213> Homo sapiens

<400> 2626  
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Arg Ile Val Ala Ala His Asn Lys Cys Pro Arg Asp Gly Arg Phe Val  
35 40 45  
Glu Gln Leu Gly Ser Tyr Asp Pro Leu Pro Asn Ser His Gly Glu Lys  
50 55 60  
Leu Val Ala Leu Asn Leu Asp Arg Ile Arg His Trp Ile Gly Cys Gly  
65 70 75 80  
Ala His Leu Ser Lys Pro Met Glu Lys Leu Leu Gly Leu Ala Gly Phe  
85 90 95  
Phe Pro Leu His Pro Met Met Ile Thr Asn Ala Glu Arg Leu Arg Arg  
100 105 110  
Lys Arg Ala Arg Glu Val Leu Leu Ala Ser Gln Lys Thr Asp Ala Glu  
115 120 125  
Ala Thr Asp Thr Glu Ala Thr Glu Thr  
130 135

<210> 2627  
<211> 320  
<212> DNA  
<213> Homo sapiens

<400> 2627  
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120  
tgcagtcagc cctagccttt ttgggaacag agaatgatgt tgaactgaag ggggcgctag  
180  
atttagaaac ctgtgagaag caagatataa tgccagaagt ggacaagcag tctgggtcgc  
240  
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300  
ttgaatatta cctgacttag  
320

<210> 2628  
<211> 90  
<212> PRT  
<213> Homo sapiens

<400> 2628  
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```

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      20           25           30
Ala Pro Phe Ser Ser Thr Ser Phe Ser Val Pro Lys Lys Ala Arg Ala
      35           40           45
Asp Cys Thr Cys Ile Ser Thr Ala Glu Leu Phe Ile Cys Asp Ser Ala
      50           55           60
Phe Phe Arg Ser Ser Gly Ser Arg Glu Arg His Ser Phe Lys Val Phe
      65           70           75           80
Phe Leu Cys Ile Pro Pro Pro Leu His Ala
      85           90

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&lt;210&gt; 2629

&lt;211&gt; 650

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2629

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180
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300
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360
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&lt;210&gt; 2630

&lt;211&gt; 58

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2630

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<211> 550

<212> PRT

<213> Homo sapiens

<400> 2632

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| Gln | Asp | Ile | Glu | Arg | Leu | Ile | His | Gln | Ser | Asp | Ile | Ile | Asp | Arg | Val |
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| Val | Tyr | Asp | Leu | Asp | Asn | Pro | Asn | Tyr | Thr | Ile | Pro | Glu | Glu | Gly | Asp |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     | 30  |     |     |     |
| Ile | Leu | Lys | Phe | Asn | Ser | Lys | Phe | Glu | Ser | Gly | Asn | Leu | Arg | Lys | Val |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ile | Gln | Ile | Arg | Lys | Asn | Glu | Tyr | Asp | Leu | Ile | Leu | Asn | Ser | Asp | Ile |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Asn | Ser | Asn | His | Tyr | His | Gln | Trp | Phe | Tyr | Phe | Glu | Val | Ser | Gly | Met |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Arg | Pro | Gly | Val | Ala | Tyr | Arg | Phe | Asn | Ile | Ile | Asn | Cys | Glu | Lys | Ser |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Asn | Ser | Gln | Phe | Asn | Tyr | Gly | Met | Gln | Pro | Leu | Met | Tyr | Ser | Val | Gln |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Glu | Ala | Leu | Asn | Ala | Arg | Pro | Trp | Trp | Ile | Arg | Met | Gly | Thr | Asp | Ile |
|     | 115 |     |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Cys | Tyr | Tyr | Lys | Asn | His | Phe | Ser | Arg | Ser | Ser | Val | Ala | Ala | Gly | Gly |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Gln | Lys | Gly | Lys | Ser | Tyr | Tyr | Thr | Ile | Thr | Phe | Thr | Val | Asn | Phe | Pro |
| 145 |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     | 160 |     |
| His | Lys | Asp | Asp | Val | Cys | Tyr | Phe | Ala | Tyr | His | Tyr | Pro | Tyr | Thr | Tyr |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Ser | Thr | Leu | Gln | Met | His | Leu | Gln | Lys | Leu | Glu | Ser | Ala | His | Asn | Pro |
|     |     | 180 |     |     |     |     | 185 |     |     |     |     |     | 190 |     |     |
| Gln | Gln | Ile | Tyr | Phe | Arg | Lys | Asp | Val | Leu | Cys | Glu | Thr | Leu | Ser | Gly |
|     | 195 |     |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Asn | Ser | Cys | Pro | Leu | Val | Thr | Ile | Thr | Ala | Met | Pro | Glu | Ser | Asn | Tyr |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
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&lt;210&gt; 2633

&lt;211&gt; 1569

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2633

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&lt;210&gt; 2634

&lt;211&gt; 59

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2634

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&lt;211&gt; 1062

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2635

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&lt;210&gt; 2636

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 <212> PRT  
 <213> Homo sapiens

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 Arg Gly Arg Val Pro Pro Val Val Arg Arg Glu Glu Thr Ser Pro Lys  
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Asp Gly Asn Leu Glu Leu Leu Thr Arg Pro Asp Thr Pro Pro Trp Ala
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Arg Asp Leu Trp Met Phe Ile Phe Ser Asp Thr Met Leu Leu Asn Ile
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Glu Pro Gln Gln Glu Leu Leu Gln Cys Tyr Leu Lys Asp Phe Ile Leu
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Leu Thr Met Arg Val Ser Thr Glu Glu Glu Leu Lys Phe Leu Gln Met
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<211> 645

<212> PRT

<213> Homo sapiens

<400> 2640

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| Leu | Gly | Pro | Trp | Ala | Glu | Asn | Asp | His | Leu | Lys | Lys | Glu | Thr | Ser | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Val | Val | Leu | Ala | Leu | Ser | Ala | Glu | Gly | Pro | Pro | Thr | Ala | Ala | Ser | Glu |
| 20  |     |     |     | 25  |     |     |     |     | 30  |     |     |     |     |     |     |
| Gln | Tyr | Thr | Asp | Arg | Leu | Glu | Leu | Gln | Pro | Gly | Ala | Ala | Ser | Gln | Phe |
|     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Ile | Ala | Ala | Thr | Pro | Thr | Ser | Leu | Met | Glu | Ala | Gln | Ala | Glu | Gly | Pro |
| 50  |     |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Leu | Thr | Ala | Ile | Thr | Ile | Pro | Arg | Pro | Ser | Val | Ala | Ser | Thr | Gln | Ser |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Thr | Ser | Gly | Ser | Phe | His | Cys | Gly | Gln | Gln | Pro | Glu | Lys | Glu | Asp | Leu |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Gln | Pro | Met | Glu | Pro | Thr | Val | Glu | Leu | Tyr | Ser | Pro | Arg | Glu | Asn | Phe |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Ser | Gly | Leu | Val | Val | Thr | Glu | Gly | Glu | Pro | Pro | Ser | Gly | Gly | Ser | Arg |
|     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |     |
| Thr | Asp | Leu | Gly | Leu | Gln | Ile | Asp | His | Ile | Gly | His | Asp | Met | Leu | Pro |
|     | 130 |     |     |     | 135 |     |     |     |     |     | 140 |     |     |     |     |
| Asn | Ile | Arg | Glu | Ser | Asn | Lys | Ser | Gln | Asp | Leu | Gly | Pro | Lys | Glu | Leu |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Pro | Asp | His | Asn | Arg | Leu | Val | Val | Arg | Glu | Phe | Glu | Asn | Leu | Pro | Gly |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Glu | Thr | Glu | Glu | Lys | Ser | Ile | Leu | Leu | Glu | Ser | Asp | Asn | Glu | Asp | Glu |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Lys | Leu | Ser | Arg | Gly | Gln | His | Cys | Ile | Glu | Ile | Ser | Ser | Leu | Pro | Gly |
|     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |     |
| Asp | Leu | Val | Ile | Val | Glu | Lys | Asp | His | Ser | Ala | Thr | Thr | Glu | Pro | Leu |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Asp | Val | Thr | Lys | Thr | Gln | Thr | Phe | Ser | Val | Val | Pro | Asn | Gln | Asp | Lys |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     | 240 |     |
| Asn | Asn | Glu | Ile | Met | Lys | Leu | Leu | Thr | Val | Gly | Thr | Ser | Glu | Ile | Ser |
|     |     |     | 245 |     |     |     |     |     | 250 |     |     |     | 255 |     |     |
| Ser | Arg | Asp | Ile | Asp | Pro | His | Val | Glu | Gly | Gln | Ile | Gly | Gln | Val | Ala |

|   |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|
|   | 260 |     | 265 |     | 270 |
| Glu Met Gln Lys Asn Lys Ile Ser Lys Asp Asp Asp Ile Met Ser Glu |     |     |     |     |     |
| 275   |     | 280 |     | 285 |     |
| Asp Leu Pro Gly His Gln Gly Asp Leu Ser Thr Phe Leu His Gln Glu |     |     |     |     |     |
| 290   | 295 | 300 |     |     |     |
| Gly Lys Arg Glu Lys Ile Thr Pro Arg Asn Gly Glu Leu Phe His Cys |     |     |     |     |     |
| 305   | 310 | 315 |     | 320 |     |
| Val Ser Glu Asn Glu His Gly Ala Pro Thr Arg Lys Asp Met Val Arg |     |     |     |     |     |
| 325   | 330 | 335 |     |     |     |
| Ser Ser Phe Val Thr Arg His Ser Arg Ile Pro Val Leu Ala Gln Glu |     |     |     |     |     |
| 340   | 345 | 350 |     |     |     |
| Ile Asp Ser Thr Leu Glu Ser Ser Ser Pro Val Ser Ala Lys Glu Lys |     |     |     |     |     |
| 355   | 360 | 365 |     |     |     |
| Leu Leu Gln Lys Lys Ala Tyr Gln Pro Asp Leu Val Lys Leu Leu Val |     |     |     |     |     |
| 370   | 375 | 380 |     |     |     |
| Glu Lys Arg Gln Phe Lys Ser Phe Leu Gly Asp Leu Ser Ser Ala Ser |     |     |     |     |     |
| 385   | 390 | 395 |     | 400 |     |
| Asp Lys Leu Leu Glu Glu Lys Leu Ala Thr Val Pro Ala Pro Phe Cys |     |     |     |     |     |
| 405   | 410 | 415 |     |     |     |
| Glu Glu Glu Val Leu Thr Pro Phe Ser Arg Leu Thr Val Asp Ser His |     |     |     |     |     |
| 420   | 425 | 430 |     |     |     |
| Leu Ser Arg Ser Ala Glu Asp Ser Phe Leu Ser Pro Ile Ile Ser Gln |     |     |     |     |     |
| 435   | 440 | 445 |     |     |     |
| Ser Arg Lys Ser Lys Ile Pro Arg Pro Val Ser Trp Val Asn Thr Asp |     |     |     |     |     |
| 450   | 455 | 460 |     |     |     |
| Gln Val Asn Ser Ser Thr Ser Ser Gln Phe Phe Pro Arg Pro Pro Pro |     |     |     |     |     |
| 465   | 470 | 475 |     | 480 |     |
| Gly Lys Pro Pro Thr Arg Pro Gly Val Glu Ala Arg Leu Arg Arg Tyr |     |     |     |     |     |
| 485   | 490 | 495 |     |     |     |
| Lys Val Leu Gly Ser Ser Asn Ser Asp Ser Asp Leu Phe Ser Arg Leu |     |     |     |     |     |
| 500   | 505 | 510 |     |     |     |
| Ala Gln Ile Leu Gln Asn Gly Ser Gln Lys Pro Arg Ser Thr Thr Gln |     |     |     |     |     |
| 515   | 520 | 525 |     |     |     |
| Cys Lys Ser Pro Gly Ser Pro His Asn Pro Lys Thr Pro Pro Lys Ser |     |     |     |     |     |
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| Pro Val Val Pro Arg Arg Ser Pro Ser Ala Ser Pro Arg Ser Ser Ser |     |     |     |     |     |
| 545   | 550 | 555 |     | 560 |     |
| Leu Pro Arg Thr Ser Ser Ser Ser Pro Ser Arg Ala Gly Arg Pro His |     |     |     |     |     |
| 565   | 570 | 575 |     |     |     |
| His Asp Gln Arg Ser Ser Ser Pro His Leu Gly Arg Ser Lys Ser Pro |     |     |     |     |     |
| 580   | 585 | 590 |     |     |     |
| Pro Ser His Ser Gly Ser Ser Ser Ser Arg Arg Ser Cys Gln Gln Glu |     |     |     |     |     |
| 595   | 600 | 605 |     |     |     |
| His Cys Lys Pro Ser Lys Asn Gly Leu Lys Gly Ser Gly Ser Leu His |     |     |     |     |     |
| 610   | 615 | 620 |     |     |     |
| His His Ser Ala Ser Thr Lys Thr Pro Gln Gly Lys Ser Lys Pro Ala |     |     |     |     |     |
| 625   | 630 | 635 |     | 640 |     |
| Ser Lys Leu Ser Arg   |     |     |     |     |     |
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&lt;210&gt; 2641

&lt;211&gt; 744

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2641

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&lt;210&gt; 2642

&lt;211&gt; 176

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2642

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Thr | Glu | Arg | Ile | His | Ser | Ile | Asn | Leu | His | Asn | Phe | Ser | Asn | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Val | Leu | Glu | Thr | Leu | Asn | Glu | Gln | Arg | Asn | Arg | Gly | His | Phe | Cys | Asp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Val | Thr | Val | Arg | Ile | His | Gly | Ser | Met | Leu | Arg | Ala | His | Arg | Cys | Val |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Leu | Ala | Ala | Gly | Ser | Pro | Phe | Phe | Gln | Asp | Lys | Leu | Leu | Leu | Gly | Tyr |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Ser | Asp | Ile | Glu | Ile | Pro | Ser | Val | Val | Ser | Val | Gln | Ser | Val | Gln | Lys |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |
| Leu | Ile | Asp | Phe | Met | Tyr | Ser | Gly | Val | Leu | Arg | Val | Ser | Gln | Ser | Glu |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Ala | Leu | Gln | Ile | Leu | Thr | Ala | Ala | Ser | Ile | Leu | Gln | Ile | Lys | Thr | Val |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Ile | Asp | Glu | Cys | Thr | Arg | Ile | Val | Ser | Gln | Asn | Val | Gly | Asp | Val | Phe |
|     | 115 |     |     |     |     | 120 |     |     |     |     |     | 125 |     |     |     |
| Pro | Gly | Ile | Gln | Asp | Ser | Gly | Gln | Asp | Thr | Pro | Arg | Gly | Thr | Pro | Glu |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Ser | Gly | Thr | Ser | Gly | Gln | Ser | Ser | Asp | Thr | Glu | Ser | Gly | Tyr | Leu | Gln |

|     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|
| 145 |     | 150 |     | 155 |     | 160 |
| Ser | His | Pro | Gln | His | Ser | Val |
| Asp | Arg | Ile | Tyr | Ser | Ala | Leu |
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| Leu | Ala | Gly | Gly | Ser | Pro | Glu | Ala | Thr | Ser | Pro | Asp | Val | Thr | Glu | Thr |
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| Lys | Asn | Ser | Pro | Leu | Met | Glu | Asp | Phe | Phe | Glu | Glu | Gly | Phe | Ser | Gln |
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| Pro | Glu | Ser | Leu | Leu | Arg | Ser | Asp | Ile | Ala | Thr | Asn | Gly | Glu | Ser | Pro |
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|     |     |     |     | 165 |     |     |     | 170 |     |     |     |     |     | 175 |     |
| Thr | Leu | Thr | Pro | Ala | Lys | Ser | Lys | Glu | Tyr | Arg | Gly | Glu | Phe | Phe | Ser |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Tyr | Ser | Asp | His | Ser | Gln | Gln | Asp | Ser | Val | Gln | Glu | Gly | Glu | Lys | Pro |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Tyr | Gln | Cys | Ser | Glu | Cys | Gly | Lys | Ser | Phe | Ser | Gly | Ser | Tyr | Arg | Leu |
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| Thr | Gln | His | Trp | Ile | Thr | His | Thr | Arg | Glu | Lys | Pro | Thr | Val | His | Gln |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     | 240 |     |
| Glu | Cys | Glu | Gln | Gly | Phe | Asp | Arg | Asn | Ala | Ser | Leu | Ser | Val | Tyr | Pro |
|     |     |     |     | 245 |     |     |     | 250 |     |     |     |     |     | 255 |     |
| Lys | Thr | His | Thr | Gly | Tyr | Lys | Phe | Tyr | Val | Cys | Asn | Glu | Tyr | Gly | Thr |
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| Thr | Phe | Ser | Gln | Ser | Thr | Tyr | Leu | Trp | His | Gln | Lys | Thr | His | Thr | Gly |
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|                         |                     |                         |
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| Glu Pro Tyr Lys Cys Asn | Glu Arg Gly Lys Ser | Phe Arg His Asn Ser     |
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| Thr Leu Lys Ile His Gln | Arg Val His Ser Gly | Glu Lys Pro Tyr Lys     |
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| Cys Ser Glu Cys Gly Lys | Ala Phe His Arg His | Thr His Leu Asn Glu     |
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| His Arg Arg Ile His Thr | Gly Tyr Arg Pro His | Lys Cys Gln Glu Cys     |
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| Val Arg Ser Phe Ser Arg | Pro Ser His Leu Met | Arg His Gln Ala Ile     |
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| His Thr Ala Glu Lys Pro | Tyr Ser Cys Ala Glu | Cys Lys Glu Thr Phe     |
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| Ser Asp Asn Asn Arg Leu | Val Gln His Gln Lys | Met His Thr Val Lys     |
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| Gly Lys Ala Ile Ser Ser | Ala Ser Leu Ile Lys | Leu Gln Ser Phe His     |
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| Thr Lys Glu His Pro Phe | Lys Cys Asn Glu Cys | Gly Lys Thr Phe Ser     |
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| His Ser Ala His Leu Ser | Lys His Gln Leu Ile | His Ala Gly Glu Asn     |
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| Pro Phe Lys Cys Ser Lys | Cys Asp Arg Val Phe | Thr Gln Arg Asn Tyr     |
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| Gln Arg Ile His Ser Gly | Glu Lys Pro Tyr Val | Cys Asp Tyr Cys Gly     |
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| Lys Ala Phe Gly Leu Ser | Ala Glu Leu Val Arg | His Gln Arg Ile His     |
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| Lys | Leu | Phe | Pro | His | Val | Thr | Pro | Lys | Gly | Ile | Asn | Gly | Ile | Asp | Phe |
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| Lys | Gly | Glu | Ala | Ile | Thr | Phe | Lys | Ala | Thr | Thr | Ala | Gly | Ile | Leu | Ala |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Thr | Leu | Ser | His | Cys | Ile | Glu | Leu | Met | Val | Lys | Arg | Glu | Asp | Ser | Trp |
|     |     |     | 50  |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Gln | Lys | Arg | Leu | Asp | Lys | Glu | Thr | Glu | Lys | Lys | Arg | Arg | Thr | Glu | Glu |
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| Glu | Gln | Ser | Gln | Ser | Glu | Lys | Val | Arg | Leu | His | Trp | Pro | Thr | Ser | Leu |

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 Gln Thr Leu Val Ser Pro Pro Glu Gly Asn Gln Glu Ile Ser Arg Asp  
 325 330 335  
 Asn Ile Leu Cys Lys Ile Thr Tyr Val Ala Asn Val Asn Pro Gly Gly  
 340 345 350  
 Trp Ala Pro Ala Ser Val Leu Arg Ala Val Ala Lys Arg Glu Tyr Pro  
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&lt;210&gt; 2649

&lt;211&gt; 1299

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2649

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&lt;210&gt; 2650

&lt;211&gt; 428

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2650

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Asp | Pro | Ser | Met | Glu | Cys | Cys | Arg | Arg | Ala | Thr | Pro | Gly | Thr | Leu |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Leu | Leu | Phe | Leu | Ala | Phe | Leu | Leu | Leu | Ser | Ser | Arg | Thr | Ala | Arg | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Glu | Glu | Asp | Arg | Asp | Gly | Leu | Trp | Asp | Ala | Trp | Gly | Pro | Trp | Ser | Glu |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Cys | Ser | Arg | Thr | Cys | Gly | Gly | Gly | Ala | Ser | Tyr | Ser | Leu | Arg | Arg | Cys |
|     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |
| Leu | Ser | Ser | Lys | Ser | Cys | Glu | Gly | Arg | Asn | Ile | Arg | Tyr | Arg | Thr | Cys |
| 65  |     |     |     | 70  |     |     |     | 75  |     |     |     |     |     | 80  |     |
| Ser | Asn | Val | Asp | Cys | Pro | Pro | Glu | Ala | Gly | Asp | Phe | Arg | Ala | Gln | Gln |
|     |     |     | 85  |     |     |     | 90  |     |     |     |     |     | 95  |     |     |
| Cys | Ser | Ala | His | Asn | Asp | Val | Lys | His | His | Gly | Gln | Phe | Tyr | Glu | Trp |
|     |     | 100 |     |     |     | 105 |     |     |     |     | 110 |     |     |     |     |
| Leu | Pro | Val | Ser | Asn | Asp | Pro | Asp | Asn | Pro | Cys | Ser | Leu | Lys | Cys | Gln |
|     |     | 115 |     |     | 120 |     |     |     |     | 125 |     |     |     |     |     |
| Ala | Lys | Gly | Thr | Thr | Leu | Val | Val | Glu | Leu | Ala | Pro | Lys | Val | Leu | Asp |

|   |     |     |     |     |
|---|-----|-----|-----|-----|
| 130   |     | 135 |     | 140 |
| Gly Thr Arg Cys Tyr Thr Glu Ser Leu Asp Met Cys Ile Ser Gly Leu |     |     |     |     |
| 145   |     | 150 |     | 155 |
| Cys Gln Ile Val Gly Cys Asp His Gln Leu Gly Ser Thr Val Lys Glu |     |     |     |     |
|   | 165 |     | 170 | 175 |
| Asp Asn Cys Gly Val Cys Asn Gly Asp Gly Ser Thr Cys Arg Leu Val |     |     |     |     |
|   | 180 |     | 185 | 190 |
| Arg Gly Gln Tyr Lys Ser Gln Leu Ser Ala Thr Lys Ser Asp Asp Thr |     |     |     |     |
|   | 195 |     | 200 | 205 |
| Val Val Ala Ile Pro Tyr Gly Ser Arg His Ile Arg Leu Val Leu Lys |     |     |     |     |
|   | 210 |     | 215 | 220 |
| Gly Pro Asp His Leu Tyr Leu Glu Thr Lys Thr Leu Gln Gly Thr Lys |     |     |     |     |
| 225   |     | 230 |     | 235 |
| Gly Glu Asn Ser Leu Ser Ser Thr Gly Thr Phe Leu Val Asp Asn Ser |     |     |     |     |
|   | 245 |     | 250 | 255 |
| Ser Val Asp Phe Gln Lys Phe Pro Asp Lys Glu Ile Leu Arg Met Ala |     |     |     |     |
|   | 260 |     | 265 | 270 |
| Gly Pro Leu Thr Ala Asp Phe Ile Val Lys Ile Arg Asn Ser Gly Ser |     |     |     |     |
|   | 275 |     | 280 | 285 |
| Ala Asp Ser Thr Val Gln Phe Ile Phe Tyr Gln Pro Ile Ile His Arg |     |     |     |     |
|   | 290 |     | 295 | 300 |
| Trp Arg Glu Thr Asp Phe Phe Pro Cys Ser Ala Thr Cys Gly Gly Gly |     |     |     |     |
| 305   |     | 310 |     | 315 |
| Tyr Gln Leu Thr Ser Ala Glu Cys Tyr Asp Leu Arg Ser Asn Arg Val |     |     |     |     |
|   | 325 |     | 330 | 335 |
| Val Ala Asp Gln Tyr Cys His Tyr Tyr Pro Glu Asn Ile Lys Pro Lys |     |     |     |     |
|   | 340 |     | 345 | 350 |
| Pro Lys Leu Gln Glu Cys Asn Leu Asp Pro Cys Pro Ala Ser Asp Gly |     |     |     |     |
|   | 355 |     | 360 | 365 |
| Tyr Lys Gln Ile Met Pro Tyr Asp Leu Tyr His Pro Leu Pro Arg Trp |     |     |     |     |
|   | 370 |     | 375 | 380 |
| Glu Ala Thr Pro Trp Thr Ala Cys Ser Ser Ser Cys Gly Gly Gly Ile |     |     |     |     |
| 385   |     | 390 |     | 395 |
| Gln Ser Pro Gly Ser Phe Leu Cys Gly Gly Gly His Pro Gly Ala Cys |     |     |     |     |
|   | 405 |     | 410 | 415 |
| His Phe Ser Gly Arg Val Glu Met His Val His Pro                 |     |     |     |     |
|   | 420 |     | 425 |     |

&lt;210&gt; 2651

&lt;211&gt; 628

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2651

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<211> 209

<212> PRT

<213> Homo sapiens

<400> 2652

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| Tyr | Thr | Val | Leu | Pro | Ala | Gly | Leu | Val | Gly | Cys | Arg | Gly | Ser | Gly | Ser |
| 1   |     |     | 5   |     |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Met | Thr | Thr | Glu | Thr | Phe | Val | Lys | Gly | Ile | Lys | Pro | Gly | Leu | Lys | Asn |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Leu | Asn | Leu | Ile | Phe | Ile | Val | Leu | Glu | Thr | Gly | Arg | Val | Thr | Lys | Thr |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Lys | Asp | Gly | His | Glu | Val | Arg | Thr | Cys | Lys | Val | Ala | Asp | Lys | Thr | Gly |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Ser | Ile | Asn | Ile | Ser | Val | Trp | Asp | Asp | Val | Gly | Asn | Leu | Ile | Gln | Pro |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Gly | Asp | Ile | Ile | Arg | Leu | Thr | Lys | Gly | Tyr | Ala | Ser | Val | Phe | Lys | Gly |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Cys | Leu | Thr | Leu | Tyr | Thr | Gly | Arg | Gly | Gly | Asp | Leu | Gln | Lys | Ile | Gly |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     | 110 |     |     |     |
| Glu | Phe | Cys | Met | Asp | Tyr | Ser | Glu | Val | Pro | Asn | Phe | Ser | Glu | Pro | Asn |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Pro | Glu | Tyr | Ser | Thr | Gln | Gln | Ala | Pro | Asn | Lys | Ala | Val | Gln | Asn | Asp |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Ser | Asn | Pro | Ser | Ala | Ser | Gln | Pro | Thr | Thr | Gly | Pro | Ser | Ala | Ala | Ser |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Pro | Ala | Ser | Glu | Asn | Gln | Asn | Gly | Asn | Gly | Met | Ser | Ala | Pro | Pro | Gly |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Phe | Arg | Val | Val | Ala | His | Ile | Pro | Leu | Ile | Leu | Pro | Pro | Thr | His | Pro |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Ala | Pro | Glu | Ser | Leu | Glu | Ala | Ser | Pro | Thr | Thr | His | Leu | Gln | Ala | Arg |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |

Leu

<210> 2653

<211> 2103

<212> DNA

<213> Homo sapiens

<400> 2653



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 <212> PRT  
 <213> Homo sapiens

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 Ser Asp Ser Lys Cys Leu Leu Leu Leu Gly Ala Val Ala His Ala Cys  
 35 40 45  
 Asn Pro Ser Thr Leu Gly Gly Arg Gly Gly Arg Ile Thr Arg Ser Gly  
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&lt;210&gt; 2656

&lt;211&gt; 493

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2656

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35      40      45
Thr Ser Leu Leu Ser Pro Pro His Arg Arg Pro Thr Leu His Arg Arg
50      55      60
Pro Thr Leu Pro Tyr Arg Thr Trp Glu Ala Ala Leu Arg Gln Lys Val
65      70      75      80
Gln Gln Trp Tyr Thr Ala Val Gly Gln Thr Glu Asn Pro Asp Asn Cys
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Val Asn Pro Leu Glu Glu Lys Pro Phe His Glu Leu Pro Phe Tyr Gln
115     120     125
Lys Val Trp Leu Leu Lys Gly Leu Cys Asp Phe Val Tyr Asp Thr His
130     135     140
Lys Glu Val Gln Asp Ala Val Leu Gly Gln Pro Ile His Glu Cys Arg
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Ala Val Ile Leu Arg Tyr Asp Tyr Leu Glu Thr Ala Tyr Val His Phe
165     170     175
Pro Gln Phe Cys Gly Ala Asp Val Arg Ile Tyr Lys Gln Arg Pro Phe
180     185     190
Gln Ala Pro Glu Phe Pro Ile Pro Pro Ile Lys Ile Gln Arg Val Pro
195     200     205
Arg Ile Lys Leu Glu Lys Leu Lys Cys Asp Tyr Val Ser Thr Ser Asn
210     215     220
Gly Glu His Arg Cys Ser Arg Asp Ser Leu Pro Ser Ser Phe Lys Lys
225     230     235     240
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245     250     255
Leu Asp Asn His Asp Ile Ser Val Glu Met Gly Val Lys Ser Asn Tyr
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Ala Lys Lys Lys Lys Lys Lys Lys Lys Lys Leu Lys Asp Val Leu Asn
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405     410     415
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|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
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| Ala | Ile | Thr | Lys | Lys | Arg | Lys | Thr | Val | Ile | Lys | Ser | Pro | Thr | Val | Pro |
|     | 450 |     | 455 |     | 460 |     |     |     |     |     |     |     |     |     |     |
| Glu | Phe | Gln | Leu | Ile | Cys | Thr | Asn | Leu | Asp | Glu | Leu | Arg | Glu | Leu | Ile |
|     | 465 |     | 470 |     | 475 |     |     |     |     |     |     |     |     | 480 |     |
| Thr | Lys | Ile | Glu | Asn | Glu | Leu | Lys | Asp | Leu | Glu | Lys | Lys |     |     |     |
|     |     |     | 485 |     |     |     |     |     | 490 |     |     |     |     |     |     |

&lt;210&gt; 2657

&lt;211&gt; 972

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2657

```

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60
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120
gtcctgttgt ctaagggccca aggggcagta gcccctctc caggggccct gagcacagag
180
gcgtcagatc agagttgccca tcttcaactt gatatgcccc ccacatccca gcagctctgt
240
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300
aggagcctca aaactgaaat gcacgtgctt cggaccagcc atccgtgcct gacaatgtcc
360
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420
taattccagc tgggaccgcc taggagcgcc atgcagctgt gggaacaagg ttgctgtcca
480
cacagacatg aagggtattcc ccgtggaatg aggttagaaa aggaagggca agagtggacg
540
tataagatgc cccatgctgt gtgaaaactg ccatgagaga gagacggagg aagggggaga
600
aagtgggaga cagagaccaa catctgcact gcctgtgcct gccacactct cccctcgggg
660
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780
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840
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960
tggggttccg ga
972

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&lt;210&gt; 2658

&lt;211&gt; 76

&lt;212&gt; PRT

<213> Homo sapiens

<400> 2658

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Glu Arg Asp Gly Gly Arg Gly Arg Lys Trp Glu Thr Glu Thr Asn Ile
 1           5           10           15
Cys Thr Ala Cys Ala Cys His Thr Leu Pro Ser Gly Pro Glu Gly Gly
 20           25           30
Leu Trp Gly Gly Ala Gly Glu Arg Gly Cys Gln Ala Trp Ala Ala Ala
 35           40           45
Asp Leu Gly Gly His Gly Gly Ser Met Pro Ser Thr Ala Gly Trp Gly
 50           55           60
Ala Leu Pro Gly Pro Ala Pro Ser Met His Gly Trp
 65           70           75

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<210> 2659

<211> 691

<212> DNA

<213> Homo sapiens

<400> 2659

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120
aatggagaga acaccttcaa acgcattgga ccccgctgg agaagcctgt ggagaagggtg
180
cagaggggtg aggccctccc gagggccgtt ccgcagaacc tgccacagcc acagatgcca
240
ccctatgcct tcgcgcaccc acccttcccc ctgcctcccg tgcggcctgt gttcaacaac
300
ttcccactca acatggggcc tatcccagcc ccgtacgtgc cccctctgcc caacgtgcgg
360
gtcaactatg acttcggtcc catccacatg cccctggagc acaacctgcc catgcacttt
420
ggccccagc cgcggcatcg cttctgatgg ccccgaatcc ccattgagca gcacaaagcc
480
cgtttgggtt aggagtgtgg atggagaacc ctcccccaag gctggtgtct gtaccattgc
540
atcctaagtc agcttgaagg gtaggctggt tttcttccca ccccttctct agaagggcta
600
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660
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a
691

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<210> 2660

<211> 120

<212> PRT

<213> Homo sapiens

<400> 2660

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Ser Glu Cys Glu Ala Glu Glu Glu Gln Lys Arg Lys Asn Gly Glu Asn
 1           5           10           15
Thr Phe Lys Arg Ile Gly Pro Pro Leu Glu Lys Pro Val Glu Lys Val

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|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     | 20  |     | 25  |     | 30  |     |     |     |     |     |     |     |     |     |     |
| Gln | Arg | Val | Glu | Ala | Leu | Pro | Arg | Pro | Val | Pro | Gln | Asn | Leu | Pro | Gln |
|     | 35  |     |     |     |     |     | 40  |     |     |     | 45  |     |     |     |     |
| Pro | Gln | Met | Pro | Pro | Tyr | Ala | Phe | Ala | His | Pro | Pro | Phe | Pro | Leu | Pro |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Pro | Val | Arg | Pro | Val | Phe | Asn | Asn | Phe | Pro | Leu | Asn | Met | Gly | Pro | Ile |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |
| Pro | Ala | Pro | Tyr | Val | Pro | Pro | Leu | Pro | Asn | Val | Arg | Val | Asn | Tyr | Asp |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Phe | Gly | Pro | Ile | His | Met | Pro | Leu | Glu | His | Asn | Leu | Pro | Met | His | Phe |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Gly | Pro | Gln | Pro | Arg | His | Arg | Phe |     |     |     |     |     |     |     |     |
|     | 115 |     |     |     |     |     | 120 |     |     |     |     |     |     |     |     |

&lt;210&gt; 2661

&lt;211&gt; 1395

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2661

ctagttgatac agcaagtttg gaaaatagaa gatgtcttca cattacaagt tgtgatgaag  
 60  
 tgtattggaa aagatgcacc gattgctctt aagaggaaac tggagatgaa agccttgagg  
 120  
 gaattagaca gattttctgt tttgaatagc caacacatgt ttgaagtact agctgccatg  
 180  
 aatcacccgat ctcttatact cctggatgaa tgcagtaagg tggtcctaga taatatccat  
 240  
 ggggtgcctt taagaataat gatcaacata ttgcagtcct gcaaagacct ccagtaccat  
 300  
 aatttgatc tcttcaaggg acttgcagat tatgtggctg caactttcga catctggaag  
 360  
 ttcagaaaag ttctttttat cctcatttta tttgaaaacc ttggctttcg acctgttggt  
 420  
 ttaatggacc tgtttatgaa gagaatagta gaggatcctg aatccctaaa catgaaaaac  
 480  
 attctatcta ttcttcatac ttactcttct ctcaatcatg tctacaaatg ccagaacaaa  
 540  
 gaacagttcg tggaagttat ggctagtgtc ctgactgggt atcttcacac tatttcttct  
 600  
 gaaaacttat tggatgcagt atattcattt tgcttgatga attactttcc cctggctcct  
 660  
 ttaaatcagc ttctgcaaaa agacatcatc agtgagctgc tgacatcaga tgacatgaag  
 720  
 aatgcttaca agctgcatac tttggatact tgtctaaaac ttgatgatac tgtctatctg  
 780  
 agggacatag ccttgtcact cccacagctg ccgctgggagc tgccatcgtc acatacaaat  
 840  
 gcaaagggtg cagaggtgct gagcagcctt ctgggaggtg aaggacactt ctcaaaggat  
 900  
 gtgcacttgc cacacaatta tcatattgat tttgaaatca gaatggacac taacaggaat  
 960  
 caagtgtac cactttctga tgtggatata acttctgcta cagatattca aagagtagct  
 1020

gtgctatgtg tttccagatc tgcttattgt ttgggttcaa gccaccccag aggattcctt  
 1080  
 gctatgaaaa tgcggcattt gaatgcaatg gggtttcatg tgatcttggt caataactgg  
 1140  
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 1200  
 gtagaagctc ttcctgttgc tgctgtaaat gtgcaaagca cacaataaag tgaaaatcaa  
 1260  
 ccttttcata ttaggagaca tgcatttgta aaaattaata aagatgacaa gtcagttgtc  
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 1380  
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 1395

<210> 2662

<211> 415

<212> PRT

<213> Homo sapiens

<400> 2662

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Val | Asp | Gln | Gln | Val | Trp | Lys | Ile | Glu | Asp | Val | Phe | Thr | Leu | Gln |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Val | Val | Met | Lys | Cys | Ile | Gly | Lys | Asp | Ala | Pro | Ile | Ala | Leu | Lys | Arg |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Lys | Leu | Glu | Met | Lys | Ala | Leu | Arg | Glu | Leu | Asp | Arg | Phe | Ser | Val | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Asn | Ser | Gln | His | Met | Phe | Glu | Val | Leu | Ala | Ala | Met | Asn | His | Arg | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Leu | Ile | Leu | Leu | Asp | Glu | Cys | Ser | Lys | Val | Val | Leu | Asp | Asn | Ile | His |
| 65  |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     | 80  |     |
| Gly | Cys | Pro | Leu | Arg | Ile | Met | Ile | Asn | Ile | Leu | Gln | Ser | Cys | Lys | Asp |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Leu | Gln | Tyr | His | Asn | Leu | Asp | Leu | Phe | Lys | Gly | Leu | Ala | Asp | Tyr | Val |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Ala | Ala | Thr | Phe | Asp | Ile | Trp | Lys | Phe | Arg | Lys | Val | Leu | Phe | Ile | Leu |
|     |     | 115 |     |     |     | 120 |     |     |     |     |     | 125 |     |     |     |
| Ile | Leu | Phe | Glu | Asn | Leu | Gly | Phe | Arg | Pro | Val | Gly | Leu | Met | Asp | Leu |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Phe | Met | Lys | Arg | Ile | Val | Glu | Asp | Pro | Glu | Ser | Leu | Asn | Met | Lys | Asn |
| 145 |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     | 160 |     |
| Ile | Leu | Ser | Ile | Leu | His | Thr | Tyr | Ser | Ser | Leu | Asn | His | Val | Tyr | Lys |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Cys | Gln | Asn | Lys | Glu | Gln | Phe | Val | Glu | Val | Met | Ala | Ser | Ala | Leu | Thr |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Gly | Tyr | Leu | His | Thr | Ile | Ser | Ser | Glu | Asn | Leu | Leu | Asp | Ala | Val | Tyr |
|     | 195 |     |     |     |     | 200 |     |     |     |     |     | 205 |     |     |     |
| Ser | Phe | Cys | Leu | Met | Asn | Tyr | Phe | Pro | Leu | Ala | Pro | Phe | Asn | Gln | Leu |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Leu | Gln | Lys | Asp | Ile | Ile | Ser | Glu | Leu | Leu | Thr | Ser | Asp | Asp | Met | Lys |
| 225 |     |     |     | 230 |     |     |     |     |     | 235 |     |     |     | 240 |     |
| Asn | Ala | Tyr | Lys | Leu | His | Thr | Leu | Asp | Thr | Cys | Leu | Lys | Leu | Asp | Asp |
|     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |     |
| Thr | Val | Tyr | Leu | Arg | Asp | Ile | Ala | Leu | Ser | Leu | Pro | Gln | Leu | Pro | Arg |



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<210> 2663
<211> 1024
<212> DNA
<213> Homo sapiens
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<400> 2663
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120
ctcggcaata ttgatttttag acaggcagac ttctgcgtta tgacccggct gctgggctac
180
gtggaccccc tggatcccag ctttgtggct gccgtcatca ccatcacctt caatccgctc
240
tactggaatg tggttgcacg atgggaacac aagaccgcga agctgagcag ggccttcgga
300
tccccctacc tggcctgcta ctctctaagc gtcaccatcc tgctcctgaa cttcctgcgc
360
tcgcaactgct tcacgcaggc catgctgagc cagcccagga tggagagcct ggacaccccc
420
gcggcctaca gcctgggcct cgcgctcctg ggactgggcg tcgtgctcgt gctctccagc
480
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540
gcgagagtga ccgtgttccc cttcaacatc ctggacaacc ccatgtactg ggggaagcaca
600
gccaactacc tgggctgggc catcatgcac gccagcccca cgggcctgct cctgacggtg
660
ctggtggccc tcacctacat aatggctctc ctatacgaag agcccttcac cgctgagatc
720
taccggcaga aagcctccgg gtcccacaag aggagctgat tgagctgcaa cagctttgct
780
gaaggcctgg ccagcctccc tcgtgcccc agtggcaggc cctgcgcagg gcgagaatgg
840

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tgccctgctgc tcagggcctc ccccgcgctg ggctgccccca gtgccttgga acctgctgcc  
 900  
 ttggggaccc tggacgtgcc gacatatggc cattgagctc caaccacac attcccatc  
 960  
 accaataaag gcaccctgac cccaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa  
 1020  
 aaaa  
 1024

<210> 2664  
 <211> 199  
 <212> PRT  
 <213> Homo sapiens

<400> 2664  
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 Ala Ala Val Ile Thr Phe Asn Pro Leu Tyr Trp Asn Val Val  
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 Ala Arg Trp Glu His Lys Thr Arg Lys Leu Ser Arg Ala Phe Gly Ser  
 35 40 45  
 Pro Tyr Leu Ala Cys Tyr Ser Leu Ser Val Thr Ile Leu Leu Leu Asn  
 50 55 60  
 Phe Leu Arg Ser His Cys Phe Thr Gln Ala Met Leu Ser Gln Pro Arg  
 65 70 75 80  
 Met Glu Ser Leu Asp Thr Pro Ala Ala Tyr Ser Leu Gly Leu Ala Leu  
 85 90 95  
 Leu Gly Leu Gly Val Val Leu Val Leu Ser Ser Phe Phe Ala Leu Gly  
 100 105 110  
 Phe Ala Gly Thr Phe Leu Gly Asp Tyr Phe Gly Ile Leu Lys Glu Ala  
 115 120 125  
 Arg Val Thr Val Phe Pro Phe Asn Ile Leu Asp Asn Pro Met Tyr Trp  
 130 135 140  
 Gly Ser Thr Ala Asn Tyr Leu Gly Trp Ala Ile Met His Ala Ser Pro  
 145 150 155 160  
 Thr Gly Leu Leu Leu Thr Val Leu Val Ala Leu Thr Tyr Ile Met Ala  
 165 170 175  
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 180 185 190  
 Ser Gly Ser His Lys Arg Ser  
 195

<210> 2665  
 <211> 720  
 <212> DNA  
 <213> Homo sapiens

<400> 2665  
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 120  
 gcgccaatgc gaagcgttgc agtcgcttga ctcacctgag gctctccaag gataacctca  
 180

atgcctgcac tgtaagggag ctgcttttcc cgggtgctgg cgagaacgga agccttcctt  
 240  
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 300  
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 360  
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 420  
 acaccaagga ccaaaatggt cacgcctcca tcagagtctc agctgggtgga cacgggaacc  
 480  
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 540  
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 600  
 ccaaatagact acattggaga catccatcag gagatggaca gggaggagct ggagctggag  
 660  
 gaagtggacc tctacagaat gaacagccag gacaagctgg gcctcactgt gtgctaccgg  
 720

&lt;210&gt; 2666

&lt;211&gt; 153

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2666

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gln | Ser | Val | Gln | Pro | Ala | Glu | Ala | Arg | Gly | Ala | Val | Gln | Ile | Thr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Tyr | Glu | Val | Cys | Gln | Val | Asn | Gly | Arg | Asp | Leu | Ser | Arg | Ala | Thr | His |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Asp | Gln | Ala | Val | Glu | Ala | Phe | Lys | Thr | Ala | Lys | Glu | Pro | Ile | Val | Val |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Gln | Val | Leu | Arg | Arg | Thr | Pro | Arg | Thr | Lys | Met | Phe | Thr | Pro | Pro | Ser |
|     |     |     | 50  |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Glu | Ser | Gln | Leu | Val | Asp | Thr | Gly | Thr | Gln | Thr | Asp | Ile | Thr | Phe | Glu |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |
| His | Ile | Met | Ala | Leu | Thr | Lys | Met | Ser | Ser | Pro | Ser | Pro | Pro | Val | Leu |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Asp | Pro | Tyr | Leu | Leu | Pro | Glu | Glu | His | Pro | Ser | Ala | His | Glu | Tyr | Tyr |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Asp | Pro | Asn | Asp | Tyr | Ile | Gly | Asp | Ile | His | Gln | Glu | Met | Asp | Arg | Glu |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Glu | Leu | Glu | Leu | Glu | Glu | Val | Asp | Leu | Tyr | Arg | Met | Asn | Ser | Gln | Asp |
|     |     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |
| Lys | Leu | Gly | Leu | Thr | Val | Cys | Tyr | Arg |     |     |     |     |     |     |     |
| 145 |     |     |     |     |     |     | 150 |     |     |     |     |     |     |     |     |

&lt;210&gt; 2667

&lt;211&gt; 289

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2667

nccatgggga atgggatgaa caagatcctg cccggcctgt acatcggcaa cttcaaagat  
 60

gccagagacg cggaacaatt gagcaagaac aaggggaacc ctttttctgt ttgtccccga  
 120  
 tgggtgccag gcctatgttg gaggacaaga catttcaaag aaagtattaa attcattcac  
 180  
 gagtgccggc tccgcgggga gagctgcctt gtacactgcc tggccgggggt ctccaggagc  
 240  
 gtgacactgg tgatcgcata catcatgacc gtcactgact ttggctggg  
 289

<210> 2668

<211> 96

<212> PRT

<213> Homo sapiens

<400> 2668

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Met | Gly | Asn | Gly | Met | Asn | Lys | Ile | Leu | Pro | Gly | Leu | Tyr | Ile | Gly |
| 1   |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Asn | Phe | Lys | Asp | Ala | Arg | Asp | Ala | Glu | Gln | Leu | Ser | Lys | Asn | Lys | Gly |
|     |     | 20  |     |     |     | 25  |     |     |     |     |     | 30  |     |     |     |
| Asn | Pro | Phe | Ser | Val | Cys | Pro | Arg | Trp | Val | Pro | Gly | Leu | Cys | Trp | Arg |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Thr | Arg | His | Phe | Lys | Glu | Ser | Ile | Lys | Phe | Ile | His | Glu | Cys | Arg | Leu |
|     | 50  |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |     |
| Arg | Gly | Glu | Ser | Cys | Leu | Val | His | Cys | Leu | Ala | Gly | Val | Ser | Arg | Ser |
| 65  |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |     |
| Val | Thr | Leu | Val | Ile | Ala | Tyr | Ile | Met | Thr | Val | Thr | Asp | Phe | Gly | Trp |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |

<210> 2669

<211> 4285

<212> DNA

<213> Homo sapiens

<400> 2669

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 120  
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 180  
 cggccccgcc gagagccgga ggcaatggat gaacagagcg tggagagcat tgctgaggtt  
 240  
 ttccgatgtt tcatttgtat ggagaaattg cgggatgcac gcctgtgtcc tcattgtccc  
 300  
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| Asp | Glu | Gln | Ser | Val | Glu | Ser | Ile | Ala | Glu | Val | Phe | Arg | Cys | Phe | Ile |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Cys | Met | Glu | Lys | Leu | Arg | Asp | Ala | Arg | Leu | Cys | Pro | His | Cys | Ser | Lys |
|     | 35  |     |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Leu | Cys | Cys | Phe | Ser | Cys | Ile | Arg | Arg | Trp | Leu | Thr | Glu | Gln | Arg | Ala |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Gln | Cys | Pro | His | Cys | Arg | Ala | Pro | Leu | Gln | Leu | Arg | Glu | Leu | Val | Asn |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Cys | Arg | Trp | Ala | Glu | Val | Thr | Gln | Gln | Leu | Asp | Thr | Leu | Gln | Leu |     |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Cys | Ser | Leu | Thr | Lys | His | Glu | Glu | Asn | Glu | Lys | Asp | Lys | Cys | Glu | Asn |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| His | His | Glu | Lys | Leu | Ser | Val | Phe | Cys | Trp | Thr | Cys | Lys | Lys | Cys | Ile |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Cys | His | Gln | Cys | Ala | Leu | Trp | Gly | Gly | Met | His | Gly | Gly | His | Thr | Phe |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
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| Glu | Val | Ala | Lys | Leu | Arg | Arg | Arg | Leu | Met | Glu | Leu | Ile | Ser | Leu | Val |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     |     | 175 |     |
| Gln | Glu | Val | Glu | Arg | Asn | Val | Glu | Ala | Val | Arg | Asn | Ala | Lys | Asp | Glu |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Arg | Val | Arg | Glu | Ile | Arg | Asn | Ala | Val | Glu | Met | Met | Ile | Ala | Arg | Leu |
|     | 195 |     |     |     |     | 200 |     |     |     |     |     | 205 |     |     |     |
| Asp | Thr | Gln | Leu | Lys | Asn | Lys | Leu | Ile | Thr | Leu | Met | Gly | Gln | Lys | Thr |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
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| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     | 240 |     |
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1913



|   |     |     |
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| 705   | 710 | 715 |
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| Ala Ala Cys Gly Thr Glu Asn Ser Gly Arg Leu Gln Asp Leu Gly Met |     |     |
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| Thr Asn Lys Lys Ser Asn Ser Pro Lys Pro Ala Arg Ser Ser Val Ala |     |     |
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| Gly Ser Leu Ser Leu Arg Arg Ala Val Asp Pro Gly Glu Asn Ser Arg |     |     |
| 785   | 790 | 795 |
| Ser Lys Gly Asp Cys Gln Thr Leu Ser Glu Gly Ser Pro Gly Ser Ser |     |     |
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| Gln Ser Gly Ser Arg His Ser Ser Pro Arg Ala Leu Ile His Gly Ser |     |     |
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| Ile Gly Asp Ile Leu Pro Lys Thr Glu Asp Arg Gln Cys Lys Ala Leu |     |     |
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| Asp Ser Asp Ala Val Val Val Ala Val Phe Ser Gly Leu Pro Ala Val |     |     |
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| Glu Lys Arg Arg Lys Met Val Thr Leu Gly Ala Asn Ala Lys Gly Gly |     |     |
| 865   | 870 | 875 |
| His Leu Glu Gly Leu Gln Met Thr Asp Leu Glu Asn Asn Ser Glu Thr |     |     |
| 885   | 890 | 895 |
| Gly Glu Leu Gln Pro Val Leu Pro Glu Gly Ala Ser Ala Ala Pro Glu |     |     |
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| Glu Gly Met Ser Ser Asp Ser Asp Ile Glu Cys Asp Thr Glu Asn Glu |     |     |
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| Glu Gln Glu Glu His Thr Ser Val Gly Gly Phe His Asp Ser Phe Met |     |     |
| 930   | 935 | 940 |
| Val Met Thr Gln Pro Pro Asp Glu Asp Thr His Ser Ser Phe Pro Asp |     |     |
| 945   | 950 | 955 |
| Gly Glu Gln Ile Gly Pro Glu Asp Leu Ser Phe Asn Thr Asp Glu Asn |     |     |
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&lt;211&gt; 814

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&lt;213&gt; Homo sapiens

&lt;400&gt; 2671

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| Arg | Val | Arg | Ala | Gln | His | Pro | Gly | Lys | Val | Gly | Gly | Arg | Arg | Trp | Arg |
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| Lys | Asp | Ser | Arg | Ala | Val | Ser | Arg | His | Gly | Arg | Gly | Asn | Cys | Gly | Ala |
|     |     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |
| Phe | Ala | Ile | Leu | Ser | Pro | Ser | Pro | Tyr | Leu | Arg | Pro | Arg | Gly | Arg | Ala |
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| His | His | Pro | Pro | Ser | Arg | Leu | Gly | Gly | Gly | Arg | Ala | Pro | Ser | Trp | Pro |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Pro | Pro | Ser | Arg | Pro | Leu | Asn | Ser | Pro | Gly | Asp | Cys | Gly | Tyr | Cys | His |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Arg | Leu | Ala | Ser | Thr | Ala | Ser | Ser | Arg | Ser | Thr | Gln | Met | Arg | Thr | Val |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Gly | Gly | Lys | Lys | Gly | Asp | Ala | Thr | Pro | Ser | Glu | Pro | Pro | Leu | Pro | Leu |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     |     | 125 |     |     |
| Pro | Arg | Pro | Xaa | Pro | Lys | Trp | Pro | Pro | Pro | Ser | Arg | Pro | Pro | Pro | Pro |
|     |     |     | 130 |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Pro | Leu | Pro | Pro | Pro | Leu | Ala | Arg | Asn | Arg | Tyr | Arg | Arg | Arg | Gly | Pro |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
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|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
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|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Leu | Arg | Phe | Thr | Arg | Gly | Trp | Phe | Pro | Asp | Ser | Phe | Gln | Thr | Pro | Leu |
|     |     |     | 195 |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Pro | Ser | Leu | Arg | Lys | Leu | Ser | Arg | Leu | Arg | Ile | Pro | Leu | Arg | Ile |     |

210

215

220

&lt;210&gt; 2673

&lt;211&gt; 5035

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2673

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4620

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<210> 2674

<211> 690

<212> PRT

<213> Homo sapiens

<400> 2674

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ala | Gly | Phe | Arg | Ala | Met | Ile | Pro | Pro | Gln | Glu | Ala | Ser | Ala | Arg |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Arg | Arg | Glu | Ile | Glu | Asp | Lys | Leu | Lys | Gln | Glu | Glu | Glu | Thr | Leu | Ser |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Phe | Ile | Arg | Asp | Ser | Leu | Glu | Lys | Ser | Asp | Gln | Leu | Thr | Lys | Asn | Met |
|     | 35  |     |     |     |     |     | 40  |     |     |     | 45  |     |     |     |     |
| Val | Ser | Ile | Leu | Ser | Ser | Phe | Glu | Ser | Arg | Leu | Met | Lys | Leu | Glu | Asn |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Ser | Ile | Ile | Pro | Val | His | Lys | Gln | Thr | Glu | Asn | Leu | Gln | Arg | Leu | Gln |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Glu | Asn | Val | Glu | Lys | Thr | Leu | Ser | Cys | Leu | Asp | His | Val | Ile | Ser | Tyr |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     | 95  |     |     |
| Tyr | His | Val | Ala | Ser | Asp | Thr | Glu | Lys | Ile | Ile | Arg | Glu | Gly | Pro | Thr |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Gly | Arg | Leu | Glu | Glu | Tyr | Leu | Gly | Ser | Met | Ala | Lys | Ile | Gln | Lys | Ala |
|     | 115 |     |     |     |     | 120 |     |     |     |     |     | 125 |     |     |     |
| Val | Glu | Tyr | Phe | Gln | Asp | Asn | Ser | Pro | Asp | Ser | Pro | Glu | Leu | Asn | Lys |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Val | Lys | Leu | Leu | Phe | Glu | Arg | Gly | Lys | Glu | Ala | Leu | Glu | Ser | Glu | Phe |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Arg | Ser | Leu | Met | Thr | Arg | His | Ser | Lys | Val | Val | Ser | Pro | Val | Leu | Ile |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Leu | Asp | Leu | Ile | Ser | Gly | Asp | Asp | Asp | Leu | Glu | Ala | Gln | Glu | Asp | Val |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Thr | Leu | Glu | His | Leu | Pro | Glu | Ser | Val | Leu | Gln | Asp | Val | Ile | Arg | Ile |
|     | 195 |     |     |     |     | 200 |     |     |     |     |     | 205 |     |     |     |
| Ser | Arg | Trp | Leu | Val | Glu | Tyr | Gly | Arg | Asn | Gln | Asp | Phe | Met | Asn | Val |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Tyr | Tyr | Gln | Ile | Arg | Ser | Ser | Gln | Leu | Asp | Arg | Ser | Ile | Lys | Gly | Leu |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     | 240 |     |
| Lys | Glu | His | Phe | His | Lys | Ser | Ser | Ser | Ser | Ser | Gly | Val | Pro | Tyr | Ser |
|     |     |     | 245 |     |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Pro | Ala | Ile | Pro | Asn | Lys | Arg | Lys | Asp | Thr | Pro | Thr | Lys | Lys | Pro | Val |

|   |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|
|   | 260 |     | 265 |     | 270 |
| Lys Arg Pro Gly Thr Ile Arg Lys Ala Gln Asn Leu Leu Lys Gln Tyr |     |     |     |     |     |
|   | 275 |     | 280 |     | 285 |
| Ser Gln His Gly Leu Asp Gly Lys Lys Gly Gly Ser Asn Leu Ile Pro |     |     |     |     |     |
|   | 290 |     | 295 |     | 300 |
| Leu Glu Gly Arg Asp Asp Met Leu Asp Val Glu Thr Asp Ala Tyr Ile |     |     |     |     |     |
| 305   |     | 310 |     | 315 | 320 |
| His Cys Val Ser Ala Phe Val Lys Leu Ala Gln Ser Glu Tyr Gln Leu |     |     |     |     |     |
|   | 325 |     | 330 |     | 335 |
| Leu Ala Asp Ile Ile Pro Glu His His Gln Lys Lys Thr Phe Asp Ser |     |     |     |     |     |
|   | 340 |     | 345 |     | 350 |
| Leu Ile Gln Asp Ala Leu Asp Gly Leu Met Leu Glu Gly Glu Asn Ile |     |     |     |     |     |
|   | 355 |     | 360 |     | 365 |
| Val Ser Ala Ala Arg Lys Ala Ile Val Arg His Asp Phe Ser Thr Val |     |     |     |     |     |
|   | 370 |     | 375 |     | 380 |
| Leu Thr Val Phe Pro Ile Leu Arg His Leu Lys Gln Thr Lys Pro Glu |     |     |     |     |     |
| 385   |     | 390 |     | 395 | 400 |
| Phe Asp Gln Val Leu Gln Gly Thr Ala Ala Ser Thr Lys Asn Lys Leu |     |     |     |     |     |
|   | 405 |     | 410 |     | 415 |
| Pro Gly Leu Ile Thr Ser Met Glu Thr Ile Gly Ala Lys Ala Leu Glu |     |     |     |     |     |
|   | 420 |     | 425 |     | 430 |
| Asp Phe Ala Asp Asn Ile Lys Asn Asp Pro Asp Lys Glu Tyr Asn Met |     |     |     |     |     |
|   | 435 |     | 440 |     | 445 |
| Pro Lys Asp Gly Thr Val His Glu Leu Thr Ser Asn Ala Ile Leu Phe |     |     |     |     |     |
|   | 450 |     | 455 |     | 460 |
| Leu Gln Gln Leu Leu Asp Phe Gln Glu Thr Ala Gly Ala Met Leu Ala |     |     |     |     |     |
| 465   |     | 470 |     | 475 | 480 |
| Ser Gln Glu Thr Ser Ser Ser Ala Thr Ser Tyr Ser Ser Glu Phe Ser |     |     |     |     |     |
|   | 485 |     | 490 |     | 495 |
| Lys Arg Leu Leu Ser Thr Tyr Ile Cys Lys Val Leu Gly Asn Leu Gln |     |     |     |     |     |
|   | 500 |     | 505 |     | 510 |
| Leu Asn Leu Leu Ser Lys Ser Lys Val Tyr Glu Asp Pro Ala Leu Ser |     |     |     |     |     |
|   | 515 |     | 520 |     | 525 |
| Ala Ile Phe Leu His Asn Asn Tyr Asn Tyr Ile Leu Lys Ser Leu Glu |     |     |     |     |     |
|   | 530 |     | 535 |     | 540 |
| Lys Ser Glu Leu Ile Gln Leu Val Ala Val Thr Gln Lys Thr Ala Glu |     |     |     |     |     |
| 545   |     | 550 |     | 555 | 560 |
| Arg Ser Tyr Arg Glu His Ile Glu Gln Gln Ile Gln Thr Tyr Gln Arg |     |     |     |     |     |
|   | 565 |     | 570 |     | 575 |
| Ser Trp Leu Lys Val Thr Asp Tyr Ile Ala Glu Lys Asn Leu Pro Val |     |     |     |     |     |
|   | 580 |     | 585 |     | 590 |
| Phe Gln Pro Gly Val Lys Leu Arg Asp Lys Glu Arg Gln Ile Ile Lys |     |     |     |     |     |
|   | 595 |     | 600 |     | 605 |
| Glu Arg Phe Lys Gly Phe Asn Asp Gly Leu Glu Glu Leu Cys Lys Ile |     |     |     |     |     |
|   | 610 |     | 615 |     | 620 |
| Gln Lys Ala Trp Ala Ile Pro Asp Thr Glu Gln Arg Asp Arg Ile Arg |     |     |     |     |     |
| 625   |     | 630 |     | 635 | 640 |
| Gln Ala Gln Lys Thr Ile Val Lys Glu Thr Tyr Gly Ala Phe Leu Gln |     |     |     |     |     |
|   | 645 |     | 650 |     | 655 |
| Lys Phe Gly Ser Val Pro Phe Thr Lys Asn Pro Glu Lys Tyr Ile Lys |     |     |     |     |     |
|   | 660 |     | 665 |     | 670 |
| Tyr Gly Val Glu Gln Val Gly Asp Met Ile Asp Arg Leu Phe Asp Thr |     |     |     |     |     |
|   | 675 |     | 680 |     | 685 |
| Ser Ala   |     |     |     |     |     |

690

<210> 2675  
 <211> 711  
 <212> DNA  
 <213> Homo sapiens

<400> 2675  
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 tgtgggcatg ctgctcatct acgtgggggt gcgcgccgtc agcgtcctgg tagagtggca  
 120  
 gcagtgggag tccctgcgct tcggcgaata tggagaccct ctgcagtgtg gagcctgggt  
 180  
 cgggcagtgc gctctttaca tcgtgatcat gatttttgaa aagtctgtcg tcttcacgt  
 240  
 cctcctccta ctccagtga aaaaggtggc cctattgaat ccaattgaaa accccgacct  
 300  
 gaagctggcc atcgatcatg tgatcgctcc cttctttgtc aacgctttga tgttttgggt  
 360  
 agtggacaat ttcctcatga gaaaggggaa gacgaaagct aagctagaag aaaggggagc  
 420  
 caaccaggac tcgaggaatg ggagcaaggt ccgctaccgg agggccgcat cccacgagga  
 480  
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 540  
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 600  
 acccgatatga cacattccca tgctgggggt gacgggaggg ccccgccagc cgctggtgtg  
 660  
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 711

<210> 2676  
 <211> 180  
 <212> PRT  
 <213> Homo sapiens

<400> 2676  
 Met Leu Leu Ile Tyr Val Gly Val Arg Ala Val Ser Val Leu Val Glu  
 1 5 10 15  
 Trp Gln Gln Trp Glu Ser Leu Arg Phe Gly Glu Tyr Gly Asp Pro Leu  
 20 25 30  
 Gln Cys Gly Ala Trp Val Gly Gln Cys Ala Leu Tyr Ile Val Ile Met  
 35 40 45  
 Ile Phe Glu Lys Ser Val Val Phe Ile Val Leu Leu Leu Gln Trp  
 50 55 60  
 Lys Lys Val Ala Leu Leu Asn Pro Ile Glu Asn Pro Asp Leu Lys Leu  
 65 70 75 80  
 Ala Ile Val Met Leu Ile Val Pro Phe Phe Val Asn Ala Leu Met Phe  
 85 90 95  
 Trp Val Val Asp Asn Phe Leu Met Arg Lys Gly Lys Thr Lys Ala Lys  
 100 105 110  
 Leu Glu Glu Arg Gly Ala Asn Gln Asp Ser Arg Asn Gly Ser Lys Val



115 120 125  
 Arg Tyr Arg Arg Ala Ala Ser His Glu Glu Ser Glu Ser Glu Ile Leu  
 130 135 140  
 Ile Ser Ala Asp Asp Glu Met Glu Glu Ser Asp Val Glu Glu Asp Leu  
 145 150 155 160  
 Arg Arg Leu Thr Pro Leu Lys Pro Val Lys Lys Lys Lys His Arg Phe  
 165 170 175  
 Gly Leu Pro Val  
 180

<210> 2677  
 <211> 735  
 <212> DNA  
 <213> Homo sapiens

<400> 2677  
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 ggccgctggt gagggcgcc cgggccgcgg tggggcacgg cgcggtgcca ggggtgtgca  
 120  
 gagccccctt tgcagggcag gagctgggga gtggttagga catcagtcct tcaggtaggg  
 180  
 ggagtgcagca catcaggtcc atatgtgtcc caggagcatc cctagctggc cgccctgagt  
 240  
 gctgcatggg gcagagatgg gcaggtacac ggccctgcct gtgtgagcac ccctccctcc  
 300  
 gctggggcct tcagcctcct gagggagaac ttctcccatg cgccgagccc agacatgagc  
 360  
 gctgcgtccc tctgcgcact ggagcagctc atgatggccc aggcccagga atgtgtgttt  
 420  
 gagggcctct caccacctgc ctccatggcc ccccaagact gcctggccca gctgcgcctg  
 480  
 gcgcaggagg ccgcccaggt gagctcgggc acccgtgtca ggatgcaggg ggtggggccg  
 540  
 agctggggtc agagcccagg tccaggcatg cgtgagctct cccacctcct tccttgtgtg  
 600  
 tcagccccga gccagctgtt gtctgtctcc ctgggggggc tggtcaggaa cctggggacc  
 660  
 cgagcctctg cctccaggga atggcacaaa gcagcaggaa ctgaggtgcc agggaggctg  
 720  
 ctgggatggg ggtcg  
 735

<210> 2678  
 <211> 170  
 <212> PRT  
 <213> Homo sapiens

<400> 2678  
 Leu Ala Ala Leu Ser Ala Ala Trp Gly Arg Asp Gly Gln Val His Gly  
 1 5 10 15  
 Pro Ala Cys Val Ser Thr Pro Pro Ser Ala Gly Ala Phe Ser Leu Leu  
 20 25 30  
 Arg Glu Asn Phe Ser His Ala Pro Ser Pro Asp Met Ser Ala Ala Ser

```

      35          40          45
Leu Cys Ala Leu Glu Gln Leu Met Met Ala Gln Ala Gln Glu Cys Val
  50          55          60
Phe Glu Gly Leu Ser Pro Pro Ala Ser Met Ala Pro Gln Asp Cys Leu
  65          70          75          80
Ala Gln Leu Arg Leu Ala Gln Glu Ala Ala Gln Val Ser Ser Gly Thr
      85          90          95
Arg Val Arg Met Gln Gly Val Gly Pro Ser Trp Gly Gln Ser Pro Gly
      100          105          110
Pro Gly Met Arg Glu Leu Ser His Leu Leu Pro Cys Val Ser Ala Pro
      115          120          125
Ser Gln Leu Leu Ser Cys Ser Leu Gly Gly Leu Val Arg Asn Leu Gly
      130          135          140
Thr Arg Ala Ser Ala Ser Arg Glu Trp His Lys Ala Ala Gly Thr Glu
  145          150          155          160
Val Pro Gly Arg Leu Leu Gly Trp Trp Ser
      165          170

```

<210> 2679  
 <211> 560  
 <212> DNA  
 <213> Homo sapiens

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<400> 2679
agccgcccc cctcctgttc cattataatc ttattttggt tatgttgata caacacaatc
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tgtccttcca agtgatcacc ggagtccaga tatttctgtc aagtcagcca accaggaagg
120
ggctgcagac aaagtgcggc aacagggact ccaccaggcc atggagctca tcccacaaga
180
cgctcaccg cacaggaggg ctgacccag ggaaacgtgt caccaggaca cagcacgaag
240
ctcaaaaggg gctagcatgc tctgtgcagc tgccagactc tgccctgaag aatcacaggg
300
cactctagtg agcgctgcag cagccagcag gccctggatg gccaggtgtg cagtggggag
360
gcacaggggg tgcaccagga cgcagccaga cctggggccag ttcgcgccga ctcttctcca
420
ttccagaggt ccaggaagca cctgtcaatg tggaagtcag aatgctcagg ccaaataccg
480
agatcaacta actattcagg ttgaaccaga ggccctgggcg ggggcatcca actgccacc
540
cgtcagactg agggacgcgt
560

```

<210> 2680  
 <211> 133  
 <212> PRT  
 <213> Homo sapiens

```

<400> 2680
Met Glu Leu Ile Pro Gln Asp Ala Ser Pro His Arg Arg Ala Asp Pro
  1          5          10          15
Arg Glu Thr Cys His Gln Asp Thr Ala Arg Ser Ser Lys Gly Ala Ser

```

```

      20      25      30
Met Leu Cys Ala Ala Ala Arg Leu Cys Pro Glu Glu Ser Gln Gly Thr
      35      40      45
Leu Val Ser Ala Ala Ala Ala Ser Arg Pro Trp Met Ala Arg Cys Ala
      50      55      60
Val Gly Arg His Arg Gly Cys Thr Arg Thr Gln Pro Asp Leu Gly Gln
      65      70      75      80
Phe Ala Pro Thr Leu Leu His Ser Arg Gly Pro Gly Ser Thr Cys Gln
      85      90      95
Cys Gly Ser Gln Asn Ala Gln Ala Lys Tyr Arg Asp Gln Leu Thr Ile
      100      105      110
Gln Val Glu Pro Glu Ala Trp Ala Gly Ala Ser Asn Cys Pro Pro Val
      115      120      125
Arg Leu Arg Asp Ala
      130

```

<210> 2681  
 <211> 585  
 <212> DNA  
 <213> Homo sapiens

```

<400> 2681
gattctctag tagccctaatt tctacccatc tggctactaa ttcaaacttt cttccttcac
60
atctgtttgt ggacttctcc aatataacta gtatgcttgg gctcattctg cttcttctct
120
tctggaatag tttatttcat gaccatgtgc agagggggtg atggggcaag cctcacaagc
180
cccgagggtc tgtggctgag gtgtacctg gctttgttgc ctggaactgc tctgactctg
240
ctcttcgctc tttctggggtc tgtgtcacta cagctctgac tcctttccac cttggagttt
300
agcttccctg ccaggaaagc taaggagtag gagttgttct tggaaacaaa tgccgagcga
360
tgtgtctgtg tcactctggcc tcgagaaggt tcttcattct ctgaatctga gagacgtgca
420
ggacaacggt ccagatttgt tttcagtact aatggttcat ctcttttttt ctgttcaccc
480
attttctttt tccctgtttc tgtatcctct ggtaacagct tgtggatttg atcttcagag
540
ggtttttctt cttgtaactt ttcttctctc agctttctca agctt
585

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<210> 2682  
 <211> 116  
 <212> PRT  
 <213> Homo sapiens

```

<400> 2682
Met Asp Glu Gln Lys Lys Arg Asp Glu Pro Leu Val Leu Lys Thr Asn
1      5      10      15
Leu Glu Arg Cys Pro Ala Arg Leu Ser Asp Ser Glu Asn Glu Glu Pro
20      25      30
Ser Arg Gly Gln Met Thr Gln Thr His Arg Ser Ala Phe Val Ser Lys

```

```

      35              40              45
Asn Asn Ser Tyr Ser Leu Ala Phe Leu Ala Gly Lys Leu Asn Ser Lys
  50              55              60
Val Glu Arg Ser Gln Ser Cys Ser Asp Thr Ala Gln Glu Arg Ala Lys
  65              70              75              80
Ser Arg Val Arg Ala Val Pro Gly Asn Lys Ala Lys Val His Leu Ser
      85              90              95
His Arg Pro Pro Gly Leu Val Arg Leu Ala Pro Ser Pro Pro Leu His
      100              105              110
Met Val Met Lys
      115

```

<210> 2683  
 <211> 498  
 <212> DNA  
 <213> Homo sapiens

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<400> 2683
naccggttac actgactcca aaactctcct tggtagccta ggtgaaacct catggccaac
  60
atcacctgga tggccaacca cactggaagg ttggatttca tctcatggg actcttcaga
  120
cgatccaaac atccagctct acttagtggt gtcattcttg tggttttcct gatggcggtg
  180
tctgaaaatg ctgtcctgat ccttctgata cactgtgaca cctacctcca ccccccatg
  240
tactttttca tcagtcaatt gtctctcatg gacatggcgt acatttctgt cactgtgccc
  300
aagatgctcc tggaccaggt catgggtgtg aataagatct cagcccctga gtgtgggatg
  360
cagatgttcc tctatctgac actagcaggt tcggaatttt tcttcttagc caccatggcc
  420
tatgaccgct acgtggccat ctgccatcct ctccgttacc ctgtcctcat gaaccatagg
  480
gtctgtcttt tcctggca
  498

```

<210> 2684  
 <211> 149  
 <212> PRT  
 <213> Homo sapiens

```

<400> 2684
Met Ala Asn Ile Thr Trp Met Ala Asn His Thr Gly Arg Leu Asp Phe
  1              5              10              15
Ile Leu Met Gly Leu Phe Arg Arg Ser Lys His Pro Ala Leu Leu Ser
      20              25              30
Val Val Ile Phe Val Val Phe Leu Met Ala Leu Ser Glu Asn Ala Val
      35              40              45
Leu Ile Leu Leu Ile His Cys Asp Thr Tyr Leu His Thr Pro Met Tyr
      50              55              60
Phe Phe Ile Ser Gln Leu Ser Leu Met Asp Met Ala Tyr Ile Ser Val
      65              70              75              80
Thr Val Pro Lys Met Leu Leu Asp Gln Val Met Gly Val Asn Lys Ile

```

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
|     |     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |  |  |  |  |
| Ser | Ala | Pro | Glu | Cys | Gly | Met | Gln | Met | Phe | Leu | Tyr | Leu | Thr | Leu | Ala |  |  |  |  |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     |     | 110 |     |  |  |  |  |
| Gly | Ser | Glu | Phe | Phe | Leu | Leu | Ala | Thr | Met | Ala | Tyr | Asp | Arg | Tyr | Val |  |  |  |  |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |  |  |  |  |
| Ala | Ile | Cys | His | Pro | Leu | Arg | Tyr | Pro | Val | Leu | Met | Asn | His | Arg | Val |  |  |  |  |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |  |  |  |  |
| Cys | Leu | Phe | Leu | Ala |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |
| 145 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |

&lt;210&gt; 2685

&lt;211&gt; 391

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2685

```

ngccggctgc acacgctgcc acctgggctg cctcgaaatg tccatgtgct gaagggtcaag
60
cgcaatgagc tggctgccct ggcacgaggg gcgctggcgg gcatgggtca gcttcgggaa
120
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180
ctcgcccatc tgcagttgct ggacatcgcc gggaatcagc tcacagagat cccggagggg
240
ctccccccat cgctggagta tctgtacctg cagaataaca agattagcgc tgttcttgcc
300
agcgcttttg actctactcc caacctcaag gggatctttc tcaggttcaa caagctggct
360
gtgggctccg tagtagaaag cgccttcggg a
391

```

&lt;210&gt; 2686

&lt;211&gt; 130

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2686

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| Xaa | Arg | Leu | His | Thr | Leu | Pro | Pro | Gly | Leu | Pro | Arg | Asn | Val | His | Val |  |  |  |  |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |  |  |  |  |
| Leu | Lys | Val | Lys | Arg | Asn | Glu | Leu | Ala | Ala | Leu | Ala | Arg | Gly | Ala | Leu |  |  |  |  |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |  |  |  |  |
| Ala | Gly | Met | Ala | Gln | Leu | Arg | Glu | Leu | Tyr | Leu | Thr | Gly | Asn | Arg | Leu |  |  |  |  |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |  |  |  |  |
| Arg | Ser | Arg | Ala | Leu | Gly | Pro | Arg | Ala | Trp | Val | Asp | Leu | Ala | His | Leu |  |  |  |  |
|     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |  |  |  |  |
| Gln | Leu | Leu | Asp | Ile | Ala | Gly | Asn | Gln | Leu | Thr | Glu | Ile | Pro | Glu | Gly |  |  |  |  |
| 65  |     |     |     | 70  |     |     |     |     |     | 75  |     |     | 80  |     |     |  |  |  |  |
| Leu | Pro | Pro | Ser | Leu | Glu | Tyr | Leu | Tyr | Leu | Gln | Asn | Asn | Lys | Ile | Ser |  |  |  |  |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     | 95  |     |     |     |  |  |  |  |
| Ala | Val | Pro | Ala | Ser | Ala | Phe | Asp | Ser | Thr | Pro | Asn | Leu | Lys | Gly | Ile |  |  |  |  |
|     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |     |  |  |  |  |
| Phe | Leu | Arg | Phe | Asn | Lys | Leu | Ala | Val | Gly | Ser | Val | Val | Glu | Ser | Ala |  |  |  |  |
|     |     | 115 |     |     |     | 120 |     |     |     |     |     | 125 |     |     |     |  |  |  |  |
| Phe | Arg |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |

130

&lt;210&gt; 2687

&lt;211&gt; 399

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2687

nagtgcaga aatgtttaat acaagagatt gaaccctacc aaaatgggag gtttagcctc  
60  
caggaatggg agtgcaataa atctctaata caagagattg agcctcacca acctccagga  
120  
tgggaaatga caggtaagac agggactaca aaagaccaag cagacaataa aattccccct  
180  
gacagtccgc taggccttat gttaagatac cggaaagata atgaaaggac caaacacaag  
240  
aaaagacagc aaatgataaa atattgctgg tttatttgga ctaaggaacc catcctgaaa  
300  
ccttttggtct tttggccaca gttaggggtg agcgggggact ggatatgccca actcctaate  
360  
cagtatgtaa aggataaaag tccagtttct caagaggag  
399

&lt;210&gt; 2688

&lt;211&gt; 91

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2688

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Thr | Gly | Lys | Thr | Gly | Thr | Thr | Lys | Asp | Gln | Ala | Asp | Asn | Lys | Ile |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Pro | Pro | Asp | Ser | Pro | Leu | Gly | Leu | Met | Leu | Arg | Tyr | Arg | Lys | Asp | Asn |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Glu | Arg | Thr | Lys | His | Lys | Lys | Arg | Gln | Gln | Met | Ile | Lys | Tyr | Cys | Trp |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Phe | Ile | Trp | Thr | Lys | Glu | Pro | Ile | Leu | Lys | Pro | Leu | Val | Phe | Trp | Pro |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Gln | Leu | Gly | Leu | Ser | Gly | Asp | Trp | Ile | Cys | Gln | Leu | Leu | Ile | Gln | Tyr |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Val | Lys | Asp | Lys | Ser | Pro | Val | Ser | Gln | Glu | Glu |     |     |     |     |     |
|     |     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     |     |

&lt;210&gt; 2689

&lt;211&gt; 560

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2689

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gccctgtttc ctcagaaaag atacaaaaat gtgggtctca ccaagttgcc caggctggtc  
120  
tcaaactcct ggctcaaga aatcctcctg gttcagcctc acaaagctcc gagattacag  
180

ttgcatgtct gtgacaagct tggaggccga gttgcaagct aagatccaag agagccatcc  
 240  
 tgaattgcga cgcggtgtact tcaataaggg attgtaaagc agggaggaaa cctctgcagc  
 300  
 tcattctgcc actgcaaagc tgggtgtagcc atgctggtga gaaaaatcct gttcaacctg  
 360  
 gggtggtata tcgtctttga aaaacaatga ctataaaagc tacaggaaag gtatttcagg  
 420  
 acgtttattg aaggcattgg tggagctctc tgtatgtgtt ttgctctgca gggaactcaa  
 480  
 agttggcatt cccgtcacgg atgagaatgg gaaccgcttg ggggagtcgg cgaacgctgc  
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 gaaacaagcc atcacgccag  
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<210> 2690

<211> 73

<212> PRT

<213> Homo sapiens

<400> 2690

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Pro | Ile | Gln | Val | Gly | Leu | Val | Gly | Phe | Cys | Leu | Val | Phe | Ala | Thr |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Pro | Leu | Cys | Cys | Ala | Leu | Phe | Pro | Gln | Lys | Arg | Tyr | Lys | Asn | Val | Gly |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Leu | Thr | Lys | Leu | Pro | Arg | Leu | Val | Ser | Asn | Ser | Trp | Pro | Gln | Glu | Ile |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Leu | Leu | Val | Gln | Pro | His | Lys | Ala | Pro | Arg | Leu | Gln | Leu | His | Val | Cys |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Asp | Lys | Leu | Gly | Gly | Arg | Val | Ala | Ser |     |     |     |     |     |     |     |
| 65  |     |     |     |     | 70  |     |     |     |     |     |     |     |     |     |     |

<210> 2691

<211> 532

<212> DNA

<213> Homo sapiens

<400> 2691

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 cagggggtgc tgaaggccct cgactacatc caccacatgg gatatgtaca caggagtgtc  
 120  
 aaagccagcc acatcctgat ctctgtggat ggaaggtct acctgtctgg tttgcgcagc  
 180  
 aacctcagca tgataagcca tgggcagcgg cagcgagtgg tccacgattt tcccaagtac  
 240  
 agtgtcaagg ttctgccgtg gctcagcccc gaggtcctcc agcagaatct ccagggttat  
 300  
 gatgccaaagt ctgacatcta cagtgtggga atcacagcct gtgaactggc caacggccat  
 360  
 gtccccctta aggatatgcc tgccacccag atgctgctag agaaactgaa cggcacagtg  
 420  
 ccctgcctgt tggataccag caccatcccc gctgaggagc tgaccatgag cccttcgcgc  
 480

tcagtggcca actctggcct gaggacagc ctgaccacca gcacaccccg gg  
532

<210> 2692  
<211> 177  
<212> PRT  
<213> Homo sapiens

<400> 2692  
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Ala Tyr Ile Leu Gln Gly Val Leu Lys Ala Leu Asp Tyr Ile His His  
20 25 30  
Met Gly Tyr Val His Arg Ser Val Lys Ala Ser His Ile Leu Ile Ser  
35 40 45  
Val Asp Gly Lys Val Tyr Leu Ser Gly Leu Arg Ser Asn Leu Ser Met  
50 55 60  
Ile Ser His Gly Gln Arg Gln Arg Val Val His Asp Phe Pro Lys Tyr  
65 70 75 80  
Ser Val Lys Val Leu Pro Trp Leu Ser Pro Glu Val Leu Gln Gln Asn  
85 90 95  
Leu Gln Gly Tyr Asp Ala Lys Ser Asp Ile Tyr Ser Val Gly Ile Thr  
100 105 110  
Ala Cys Glu Leu Ala Asn Gly His Val Pro Phe Lys Asp Met Pro Ala  
115 120 125  
Thr Gln Met Leu Leu Glu Lys Leu Asn Gly Thr Val Pro Cys Leu Leu  
130 135 140  
Asp Thr Ser Thr Ile Pro Ala Glu Glu Leu Thr Met Ser Pro Ser Arg  
145 150 155 160  
Ser Val Ala Asn Ser Gly Leu Ser Asp Ser Leu Thr Thr Ser Thr Pro  
165 170 175  
Arg

<210> 2693  
<211> 798  
<212> DNA  
<213> Homo sapiens

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120  
aagctgcagg agttccctgt ggccatccgg accctgggca gactgcagga actgggggttc  
180  
cataacaaca acatcaaggc catcccagaa aaggccttca tggggaaccc tctgctacag  
240  
acgatacact tttatgataa cccaatccag tttgtgggaa gatcggcatt ccagtacctg  
300  
cctaaactcc acacactatc tctgaatggt gccatggaca tccaggagtt tccagatctc  
360  
aaaggcacca ccagcctgga gatcctgacc ctgaccgcg caggcatccg gctgctccca  
420



tcggggatgt gccaacagct gccagggctc cgagtcctgg aactgtctca caatcaaatt  
 480  
 gagggagctgc ccagcctgca caggtgtcag aaattggagg aaatcggcct ccaacacaac  
 540  
 cgcactctggg aaattggagc tgacaccttc agccagctga gctccctgca agccctggat  
 600  
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 660  
 gtcaagctgg acctgacaga caaccagctg accacactgc ccctggctgg acttgggggc  
 720  
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 780  
 ttcccaaac tgaggatc  
 798

<210> 2694

<211> 266

<212> PRT

<213> Homo sapiens

<400> 2694

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Phe | Gln | Asn | Leu | Thr | Ser | Leu | Val | Val | Leu | His | Leu | His | Asn | Asn |
| 1   |     |     | 5   |     |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Arg | Ile | Gln | His | Leu | Gly | Thr | His | Ser | Phe | Glu | Gly | Leu | His | Asn | Leu |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     |     | 30  |     |     |
| Glu | Thr | Leu | Asp | Leu | Asn | Tyr | Asn | Lys | Leu | Gln | Glu | Phe | Pro | Val | Ala |
|     | 35  |     |     |     |     |     | 40  |     |     |     | 45  |     |     |     |     |
| Ile | Arg | Thr | Leu | Gly | Arg | Leu | Gln | Glu | Leu | Gly | Phe | His | Asn | Asn | Asn |
|     | 50  |     |     |     | 55  |     |     |     |     |     | 60  |     |     |     |     |
| Ile | Lys | Ala | Ile | Pro | Glu | Lys | Ala | Phe | Met | Gly | Asn | Pro | Leu | Leu | Gln |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Thr | Ile | His | Phe | Tyr | Asp | Asn | Pro | Ile | Gln | Phe | Val | Gly | Arg | Ser | Ala |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Phe | Gln | Tyr | Leu | Pro | Lys | Leu | His | Thr | Leu | Ser | Leu | Asn | Gly | Ala | Met |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Asp | Ile | Gln | Glu | Phe | Pro | Asp | Leu | Lys | Gly | Thr | Thr | Ser | Leu | Glu | Ile |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Leu | Thr | Leu | Thr | Arg | Ala | Gly | Ile | Arg | Leu | Leu | Pro | Ser | Gly | Met | Cys |
|     | 130 |     |     |     |     | 135 |     |     |     |     |     | 140 |     |     |     |
| Gln | Gln | Leu | Pro | Arg | Leu | Arg | Val | Leu | Glu | Leu | Ser | His | Asn | Gln | Ile |
| 145 |     |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     | 160 |
| Glu | Glu | Leu | Pro | Ser | Leu | His | Arg | Cys | Gln | Lys | Leu | Glu | Glu | Ile | Gly |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Leu | Gln | His | Asn | Arg | Ile | Trp | Glu | Ile | Gly | Ala | Asp | Thr | Phe | Ser | Gln |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Leu | Ser | Ser | Leu | Gln | Ala | Leu | Asp | Leu | Arg | Trp | Asn | Ala | Ile | Arg | Ser |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Ile | His | Pro | Glu | Ala | Phe | Ser | Thr | Leu | His | Ser | Leu | Val | Lys | Leu | Asp |
|     | 210 |     |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |
| Leu | Thr | Asp | Asn | Gln | Leu | Thr | Thr | Leu | Pro | Leu | Ala | Gly | Leu | Gly | Gly |
| 225 |     |     |     |     | 230 |     |     |     |     |     | 235 |     |     |     | 240 |
| Leu | Met | His | Leu | Lys | Leu | Lys | Gly | Asn | Leu | Ala | Leu | Ser | Gln | Ala | Phe |
|     |     |     | 245 |     |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Ser | Lys | Asp | Ser | Phe | Pro | Lys | Leu | Arg | Ile |     |     |     |     |     |     |

260

265

&lt;210&gt; 2695

&lt;211&gt; 2265

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2695

nagccagagg gacgagctag cccgacgatg gcccagggga cattgatccg tgtgacccca  
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 gagcagccca cccatgccgt gtgtgtgctg ggcacctga ctcagcttga catctgcagc  
 120  
 tctgcccctg aggactgcac gtccttcagc atcaacgcct ccccaggggt ggtcgtggat  
 180  
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 240  
 cctggggtag aggtgaccct gacgatgaaa gcggccagt gtagcacagg cgaccagaag  
 300  
 gttcagattt catactacgg acccaagact ccaccagtca aagctctact ctacctcacc  
 360  
 gcggtggaaa tctccctgtg cgcagacatc acccgaccg gcaaagtga gccaaccaga  
 420  
 gctgtgaaag atcagaggac ctggacctgg ggcccttgtg gacaggggtgc catcctgctg  
 480  
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 540  
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 600  
 gacttcttca caaaccatac actggtgctc cacgtggcca ggtctgagat ggacaaagtg  
 660  
 aggggtgtttc aggccacacg gggcaaactg tctccaagt gcagcgtagt cttgggtccc  
 720  
 aagtggccct ctactacct gatggtcccc ggtggaaagc acaacatgga cttctacgtg  
 780  
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 900  
 cgcgtggcgc cctggatcat gaccccaac acccagcccc cgcaggaggt gtacgcgtgc  
 960  
 agtatttttg aaaatgagga cttcctgaag tcagtgacta ctctggccat gaaagccaag  
 1020  
 tgcaagctga ccatctgccc tgaggaggag aacatggatg accagtggat gcaggatgaa  
 1080  
 atggagatcg gctacatcca agccccacac aaaacgctgc ccgtggtctt cgactctcca  
 1140  
 aggaacagag gcctgaagga gtttcccatc aaacgagtga tgggtccaga ttttggtat  
 1200  
 gtaactcgag ggcccaaac agggggtatc agtggactgg actcctttgg gaacctggaa  
 1260  
 gtgagcccc cagtacagc caggggcaag gaataccgc tgggcaggat tctcttcggg  
 1320  
 gacagctgtt atcccagcaa tgacagccgg cagatgcacc aggcctgca ggacttcctc  
 1380

agtgcaccagc aggtgcaggc ccctgtgaag ctctattctg actggctgtc cgtggggccac  
 1440  
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 1500  
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 1560  
 gccctgctgt tcgaagggat caagaaaaaa aaacagcaga aaataaagaa cattctgtca  
 1620  
 aacaagacat tgagagaaca taattcattt gtggagagat gcatcgactg gaaccgcgag  
 1680  
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 aagctcaaag agttctctaa ggcggaagct tttttcccca acatggtgaa catgctgggt  
 1800  
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 1860  
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 1920  
 gacttcttca cctaccacat caggcatggg gaggtgcact gcggcaccaa cgtgcgcaga  
 1980  
 aagcccttct ccttcaagtg gtggaacatg gtgccctgag cccatcttcc ctggcgctct  
 2040  
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 2100  
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 2160  
 gatgtcccag tttcccactc tgaagatccc aacatggtcc tagcactgca cactcagttc  
 2220  
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 2265

&lt;210&gt; 2696

&lt;211&gt; 663

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2696

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Gln | Gly | Thr | Leu | Ile | Arg | Val | Thr | Pro | Glu | Gln | Pro | Thr | His |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ala | Val | Cys | Val | Leu | Gly | Thr | Leu | Thr | Gln | Leu | Asp | Ile | Cys | Ser | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ala | Pro | Glu | Asp | Cys | Thr | Ser | Phe | Ser | Ile | Asn | Ala | Ser | Pro | Gly | Val |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Val | Val | Asp | Ile | Ala | His | Ser | Pro | Pro | Ala | Lys | Lys | Lys | Ser | Thr | Gly |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Ser | Ser | Thr | Trp | Pro | Leu | Asp | Pro | Gly | Val | Glu | Val | Thr | Leu | Thr | Met |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |
| Lys | Ala | Ala | Ser | Gly | Ser | Thr | Gly | Asp | Gln | Lys | Val | Gln | Ile | Ser | Tyr |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Tyr | Gly | Pro | Lys | Thr | Pro | Pro | Val | Lys | Ala | Leu | Leu | Tyr | Leu | Thr | Ala |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Val | Glu | Ile | Ser | Leu | Cys | Ala | Asp | Ile | Thr | Arg | Thr | Gly | Lys | Val | Lys |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Pro | Thr | Arg | Ala | Val | Lys | Asp | Gln | Arg | Thr | Trp | Thr | Trp | Gly | Pro | Cys |

|   |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|
| 130   |     | 135 |     | 140 |     |
| Gly Gln Gly Ala Ile Leu Leu Val Asn Cys Asp Arg Asp Asn Leu Glu |     |     |     |     |     |
| 145   |     | 150 |     | 155 | 160 |
| Ser Ser Ala Met Asp Cys Glu Asp Asp Glu Val Leu Asp Ser Glu Asp |     |     |     |     |     |
|   | 165 |     | 170 |     | 175 |
| Leu Gln Asp Met Ser Leu Met Thr Leu Ser Thr Lys Thr Pro Lys Asp |     |     |     |     |     |
|   | 180 |     | 185 |     | 190 |
| Phe Phe Thr Asn His Thr Leu Val Leu His Val Ala Arg Ser Glu Met |     |     |     |     |     |
|   | 195 |     | 200 |     | 205 |
| Asp Lys Val Arg Val Phe Gln Ala Thr Arg Gly Lys Leu Ser Ser Lys |     |     |     |     |     |
|   | 210 |     | 215 |     | 220 |
| Cys Ser Val Val Leu Gly Pro Lys Trp Pro Ser His Tyr Leu Met Val |     |     |     |     |     |
| 225   |     | 230 |     | 235 | 240 |
| Pro Gly Gly Lys His Asn Met Asp Phe Tyr Val Glu Ala Leu Ala Phe |     |     |     |     |     |
|   | 245 |     | 250 |     | 255 |
| Pro Asp Thr Asp Phe Pro Gly Leu Ile Thr Leu Thr Ile Ser Leu Leu |     |     |     |     |     |
|   | 260 |     | 265 |     | 270 |
| Asp Thr Ser Asn Leu Glu Leu Pro Glu Ala Val Val Phe Gln Asp Ser |     |     |     |     |     |
|   | 275 |     | 280 |     | 285 |
| Val Val Phe Arg Val Ala Pro Trp Ile Met Thr Pro Asn Thr Gln Pro |     |     |     |     |     |
|   | 290 |     | 295 |     | 300 |
| Pro Gln Glu Val Tyr Ala Cys Ser Ile Phe Glu Asn Glu Asp Phe Leu |     |     |     |     |     |
| 305   |     | 310 |     | 315 | 320 |
| Lys Ser Val Thr Thr Leu Ala Met Lys Ala Lys Cys Lys Leu Thr Ile |     |     |     |     |     |
|   | 325 |     | 330 |     | 335 |
| Cys Pro Glu Glu Glu Asn Met Asp Asp Gln Trp Met Gln Asp Glu Met |     |     |     |     |     |
|   | 340 |     | 345 |     | 350 |
| Glu Ile Gly Tyr Ile Gln Ala Pro His Lys Thr Leu Pro Val Val Phe |     |     |     |     |     |
|   | 355 |     | 360 |     | 365 |
| Asp Ser Pro Arg Asn Arg Gly Leu Lys Glu Phe Pro Ile Lys Arg Val |     |     |     |     |     |
|   | 370 |     | 375 |     | 380 |
| Met Gly Pro Asp Phe Gly Tyr Val Thr Arg Gly Pro Gln Thr Gly Gly |     |     |     |     |     |
| 385   |     | 390 |     | 395 | 400 |
| Ile Ser Gly Leu Asp Ser Phe Gly Asn Leu Glu Val Ser Pro Pro Val |     |     |     |     |     |
|   | 405 |     | 410 |     | 415 |
| Thr Val Arg Gly Lys Glu Tyr Pro Leu Gly Arg Ile Leu Phe Gly Asp |     |     |     |     |     |
|   | 420 |     | 425 |     | 430 |
| Ser Cys Tyr Pro Ser Asn Asp Ser Arg Gln Met His Gln Ala Leu Gln |     |     |     |     |     |
|   | 435 |     | 440 |     | 445 |
| Asp Phe Leu Ser Ala Gln Gln Val Gln Ala Pro Val Lys Leu Tyr Ser |     |     |     |     |     |
|   | 450 |     | 455 |     | 460 |
| Asp Trp Leu Ser Val Gly His Val Asp Glu Phe Leu Ser Phe Val Pro |     |     |     |     |     |
| 465   |     | 470 |     | 475 | 480 |
| Ala Pro Asp Arg Lys Gly Phe Arg Leu Leu Ala Ser Pro Arg Ser     |     |     |     |     |     |
|   | 485 |     | 490 |     | 495 |
| Cys Tyr Lys Leu Phe Gln Glu Gln Gln Asn Glu Gly His Gly Glu Ala |     |     |     |     |     |
|   | 500 |     | 505 |     | 510 |
| Leu Leu Phe Glu Gly Ile Lys Lys Lys Lys Gln Gln Lys Ile Lys Asn |     |     |     |     |     |
|   | 515 |     | 520 |     | 525 |
| Ile Leu Ser Asn Lys Thr Leu Arg Glu His Asn Ser Phe Val Glu Arg |     |     |     |     |     |
|   | 530 |     | 535 |     | 540 |
| Cys Ile Asp Trp Asn Arg Glu Leu Leu Lys Arg Glu Leu Gly Leu Ala |     |     |     |     |     |
| 545   |     | 550 |     | 555 | 560 |
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<212> DNA
<213> Homo sapiens
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1020

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&lt;210&gt; 2698

&lt;211&gt; 332

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2698

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 Arg Gln Gly Ile Val Pro Pro Gly Leu Thr Glu Asn Glu Leu Trp Arg  
 65 70 75 80  
 Ala Lys Tyr Ile Tyr Asp Ser Ala Phe His Pro Asp Thr Gly Glu Lys  
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 115 120 125  
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 Asn Arg Ser Gly Asp Ala Pro Leu Thr Val Asn Glu Leu Gly Thr Ala  
 145 150 155 160  
 Tyr Val Ser Ala Thr Thr Gly Ala Val Ala Thr Ala Leu Gly Leu Asn  
 165 170 175  
 Ala Leu Thr Lys His Val Ser Pro Leu Ile Gly Arg Phe Val Pro Phe  
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 Ala Ala Val Ala Ala Ala Asn Cys Ile Asn Ile Pro Leu Met Arg Gln  
 195 200 205  
 Arg Glu Leu Lys Val Gly Ile Pro Val Thr Asp Glu Asn Gly Asn Arg  
 210 215 220  
 Leu Gly Glu Ser Ala Asn Ala Ala Lys Gln Ala Ile Thr Gln Val Val  
 225 230 235 240  
 Val Ser Arg Ile Leu Met Ala Ala Pro Gly Met Ala Ile Pro Pro Phe  
 245 250 255  
 Ile Met Asn Thr Leu Glu Lys Lys Ala Phe Leu Lys Arg Phe Pro Trp  
 260 265 270  
 Met Ser Ala Pro Ile Gln Val Gly Leu Val Gly Phe Cys Leu Val Phe  
 275 280 285  
 Ala Thr Pro Leu Cys Cys Ala Leu Phe Pro Gln Lys Ser Ser Met Ser  
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 Val Thr Ser Leu Glu Ala Glu Leu Gln Ala Lys Ile Gln Glu Ser His  
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 Pro Glu Leu Arg Arg Val Tyr Phe Asn Lys Gly Leu  
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&lt;210&gt; 2699

&lt;211&gt; 974

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2699

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&lt;210&gt; 2700

&lt;211&gt; 177

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2700

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Pro | Leu | Pro | Asp | Thr | Met | Phe | Cys | Ala | Gln | Gln | Ile | His | Ile | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Pro | Glu | Leu | Pro | Asp | Ile | Leu | Lys | Gln | Phe | Thr | Lys | Ala | Ala | Ile | Arg |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Thr | Gln | Pro | Ala | Asp | Val | Leu | Arg | Trp | Ser | Ala | Gly | Tyr | Phe | Ser | Ala |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Leu | Ser | Arg | Gly | Asp | Pro | Leu | Pro | Val | Lys | Asp | Arg | Met | Glu | Met | Pro |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Val | Ala | Thr | Gln | Lys | Thr | Asp | Thr | Gly | Leu | Thr | Gln | Gly | Leu | Leu | Lys |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Val | Leu | His | Lys | Gln | Cys | His | His | Lys | Arg | Tyr | Val | Glu | Leu | Thr | Asp |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Leu | Glu | Gln | Lys | Trp | Lys | Asn | Leu | Cys | Leu | Pro | Lys | Glu | Lys | Phe | Lys |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Ala | Leu | Leu | Gln | Leu | Asp | Pro | Cys | Glu | Asn | Lys | Ile | Lys | Trp | Ile | Asn |



115 120 125  
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 130 135 140  
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 35 40 45  
 Ala Ser Arg Asn Ile Val Gln Asn Tyr Arg Ala Gly Val Val Thr Pro  
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1941

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|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Leu | Thr | Gln | Pro | Thr | Tyr | Thr | Gly | Ala | Ile | Ile | Ser | Ile | Cys | Cys | Cys |
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| Phe | His | Val | Ser | Thr | His | Ser | Ala | Thr | Ala | Gln | Pro | Gln | Asn | Pro | Asp |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
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<213> Homo sapiens

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Ala Ser Phe Lys Ala Glu Ile Arg His Leu Leu Glu Arg Val Asp Gln
          370          375          380
Val Val Arg Glu Lys Arg Ser Tyr Gly Arg Ile Trp Thr Ala Glu Lys
385          390          395          400
Leu Lys Ser Leu Met Ala Ser Glu Val Asp Asp His Asp Ala Ala Ile

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405 410 415  
 Glu Arg Arg Asn Glu Tyr Asn Leu Arg Lys Leu Asp Glu Glu Tyr Lys  
 420 425 430  
 Glu Arg Ile Ala Ala Leu Lys Asn Glu Leu Arg Lys Glu Arg Glu Gln  
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 Ile Leu Gln Gln Ala Gly Lys Gln Arg Leu Glu Leu Glu Gln Glu Ile  
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 Glu Lys Ala Lys Thr Glu Glu Asn Tyr Ile Arg Asp Arg Leu Ala Leu  
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 Ser Leu Lys Glu Asn Ser Arg Leu Glu Asn Glu Leu Leu Glu Asn Ala  
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 Glu Lys Leu Ala Glu Tyr Glu Asn Leu Thr Asn Lys Leu Gln Arg Asn  
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 Leu Glu Asn Val Leu Ala Glu Lys Phe Gly Asp Leu Asp Pro Ser Ser  
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 Ala Glu Phe Phe Leu Gln Glu Arg Leu Thr Gln Met Arg Asn Glu  
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 Tyr Glu Arg Gln Cys Arg Val Leu Gln Asp Gln Val Asp Glu Leu Gln  
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 Ser Glu Leu Glu Glu Tyr Arg Ala Gln Gly Arg Val Leu Arg Leu Pro  
 565 570 575  
 Leu Lys Asn Ser Pro Ser Glu Glu Val Glu Ala Asn Ser Gly Gly Ile  
 580 585 590  
 Glu Pro Glu His Gly Leu Gly Ser Glu Glu Cys Asn Pro Leu Asn Met  
 595 600 605  
 Ser Ile Glu Ala Glu Leu Val Ile Glu Gln Met Lys Glu Gln His His  
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 Arg Asp Ile Cys Cys Leu Arg Leu Glu Leu Glu Asp Lys Val Arg His  
 625 630 635 640  
 Tyr Glu Lys Gln Leu Asp Glu Thr Val Val Ser Cys Lys Lys Ala Gln  
 645 650 655  
 Glu Asn Met Lys Gln Arg His Glu Asn Glu Thr His Thr Leu Glu Glu  
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 Gln Ile Ser Asp Leu Lys Met Lys Ile Ala Glu Leu Gln Gly Gln Ala  
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 Ala Val Leu Lys Glu Ala His His Glu Ala Thr Cys Arg His Glu Glu  
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 Glu Lys Lys Gln Leu Gln Val Lys Leu Glu Glu Glu Lys Thr His Leu  
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 Thr Gln Ala Gln Ala Ser Phe Gly Arg Glu Arg Glu Gly Leu Gln Ser  
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 Ser Ala Trp Thr Glu Glu Lys Val Arg Gly Leu Thr Gln Glu Leu Glu  
 755 760 765  
 Gln Phe His Gln Glu Gln Leu Thr Ser Leu Val Glu Lys His Thr Leu  
 770 775 780  
 Glu Lys Glu Glu Leu Arg Lys Glu Leu Leu Glu Lys His Gln Arg Glu  
 785 790 795 800  
 Leu Gln Glu Gly Arg Glu Lys Met Glu Thr Glu Cys Asn Arg Arg Thr  
 805 810 815  
 Ser Gln Ile Glu Ala Gln Phe Gln Ser Asp Cys Gln Lys Val Thr Glu  
 820 825 830  
 Arg Cys Glu Ser Ala Leu Gln Ser Leu Glu Gly Arg Tyr Arg Gln Glu

|   |      |      |
|---|------|------|
| 835   | 840  | 845  |
| Leu Lys Asp Leu Gln Glu Gln Gln Arg Glu Glu Lys Ser Gln Trp Glu |      |      |
| 850   | 855  | 860  |
| Phe Glu Lys Asp Glu Leu Thr Gln Glu Cys Ala Glu Ala Gln Glu Leu |      |      |
| 870   | 875  | 880  |
| Leu Lys Glu Thr Leu Lys Arg Glu Lys Thr Thr Ser Leu Val Leu Thr |      |      |
| 885   | 890  | 895  |
| Gln Glu Arg Glu Met Leu Glu Lys Thr Tyr Lys Asp His Leu Asn Ser |      |      |
| 900   | 905  | 910  |
| Met Val Val Glu Arg Gln Gln Leu Leu Gln Asp Leu Glu Asp Leu Arg |      |      |
| 915   | 920  | 925  |
| Asn Val Ser Glu Thr Gln Gln Ser Leu Leu Ser Asp Gln Ile Leu Glu |      |      |
| 930   | 935  | 940  |
| Leu Lys Ser Ser His Lys Arg Glu Leu Arg Glu Arg Glu Glu Val Leu |      |      |
| 945   | 950  | 955  |
| Cys Gln Gln Gly Val Ser Glu Gln Leu Ala Ser Gln Arg Leu Glu Arg |      |      |
| 965   | 970  | 975  |
| Leu Glu Met Glu His Asp Gln Glu Arg Gln Glu Met Met Ser Lys Leu |      |      |
| 980   | 985  | 990  |
| Leu Ala Met Glu Asn Ile His Lys Ala Thr Cys Glu Thr Ala Asp Arg |      |      |
| 995   | 1000 | 1005 |
| Glu Arg Ala Glu Met Ser Thr Glu Ile Ser Arg Leu Gln Ser Lys Ile |      |      |
| 1010  | 1015 | 1020 |
| Lys Glu Met Gln Gln Ala Thr Ser Pro Leu Ser Met Leu Gln Ser Gly |      |      |
| 1025  | 1030 | 1035 |
| Cys Gln Val Ile Gly Glu Glu Glu Val Glu Gly Asp Gly Ala Leu Ser |      |      |
| 1045  | 1050 | 1055 |
| Leu Leu Gln Lys Gly Glu Gln Leu Leu Glu Glu Asn Gly Asp Val Leu |      |      |
| 1060  | 1065 | 1070 |
| Leu Ser Leu Gln Arg Ala His Glu Gln Ala Val Lys Glu Asn Val Lys |      |      |
| 1075  | 1080 | 1085 |
| Met Ala Thr Glu Ile Ser Arg Leu Gln Gln Arg Leu Gln Lys Leu Glu |      |      |
| 1090  | 1095 | 1100 |
| Pro Gly Leu Val Met Ser Ser Cys Leu Asp Glu Pro Ala Thr Glu Phe |      |      |
| 1105  | 1110 | 1115 |
| Phe Gly Asn Thr Ala Glu Gln Thr Glu Pro Phe Leu Gln Gln Asn Arg |      |      |
| 1125  | 1130 | 1135 |
| Thr Lys Gln Val Glu Gly Val Thr Arg Arg His Val Leu Ser Asp Leu |      |      |
| 1140  | 1145 | 1150 |
| Glu Asp Asp Glu Val Arg Asp Leu Gly Ser Thr Gly Thr Ser Ser Val |      |      |
| 1155  | 1160 | 1165 |
| Gln Arg Gln Glu Val Lys Ile Glu Glu Ser Glu Ala Ser Val Glu Gly |      |      |
| 1170  | 1175 | 1180 |
| Phe Ser Glu Leu Glu Asn Ser Glu Glu Thr Arg Thr Glu Ser Trp Glu |      |      |
| 1185  | 1190 | 1195 |
| Leu Lys Asn His Ile Ser Leu Leu Gln Glu Gln Leu Met Met Phe Cys |      |      |
| 1205  | 1210 | 1215 |
| Ala Asp Cys Asp Leu Ala Ser Glu Lys Lys Gln Glu Leu Leu Phe Asp |      |      |
| 1220  | 1225 | 1230 |
| Val Ser Val Leu Lys Lys Lys Leu Lys Ile Leu Glu Arg Ile Pro Glu |      |      |
| 1235  | 1240 | 1245 |
| Ala Ser Pro Arg Tyr Lys Leu Leu Tyr Glu Asp Val Ser Arg Glu Asn |      |      |
| 1250  | 1255 | 1260 |
| Asp Cys Leu Gln Glu Glu Leu Glu Met Met Glu Thr Arg Tyr Asp Glu |      |      |

1265                      1270                      1275                      1280  
 Ala Leu Glu Asn Asn Lys Glu Leu Thr Ala Glu Val Phe Arg Leu Gln  
                                  1285                      1290                      1295  
 Asp Glu Leu Lys Lys Met Glu Glu Val Thr Glu Thr Phe Leu Ser Leu  
                                  1300                      1305                      1310  
 Glu Lys Ser Tyr Asp Glu Val Lys Ile Glu Asn Glu Glu Leu Asn Val  
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 Trp Ser Ser Gly Val Thr Ala Ala Tyr Gly Lys Xaa Ser Leu Glu Asn  
 1345                      1350                      1355                      1360  
 Leu Glu Ile Glu Pro Asp Gly Asn Ile Leu Gln Leu Asn Gln Thr Leu  
                                  1365                      1370                      1375  
 Glu Glu Cys Val Pro Arg Val Arg Ser Val His His Val Ile Glu Glu  
                                  1380                      1385                      1390  
 Cys Lys Gln Glu Asn Gln Tyr Leu Glu Gly Asn Thr Gln Leu Leu Glu  
                                  1395                      1400                      1405  
 Lys Val Lys Ala His Glu Ile Ala Trp Leu His Gly Thr Ile Gln Thr  
                                  1410                      1415                      1420  
 His Gln Glu Arg Pro Arg Val Gln Asn Gln Val Ile Leu Glu Glu Asn  
 1425                      1430                      1435                      1440  
 Thr Thr Leu Leu Gly Phe Gln Asp Lys His Phe Gln His Gln Ala Thr  
                                  1445                      1450                      1455  
 Ile Ala Glu Leu Glu Leu Glu Lys Thr Lys Leu Gln Glu Leu Thr Arg  
                                  1460                      1465                      1470  
 Lys Leu Lys Glu Arg Val Pro Ile Leu Val Lys Gln Lys Asp Val Leu  
                                  1475                      1480                      1485  
 Ser Pro Gly Lys Lys Glu Glu Leu Lys Ala Met Met His Asp Leu  
                                  1490                      1495                      1500  
 Gln Ile Pro Cys Ser Glu Met Gln Gln Lys Val Glu Leu Leu Lys Tyr  
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 Thr Thr Leu Asn Glu Glu Asp Ser Ile Ser Asn Leu Lys Leu Gly Thr  
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 Leu Asn Gly Ser Gln Glu Glu Met Trp Gln Lys Thr Glu Ser Val Lys  
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 1585                      1590                      1595                      1600  
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                                  1650                      1655                      1660  
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 1665                      1670                      1675                      1680  
 Glu Asn Pro Leu Leu Glu Asp Glu Leu Glu Lys Met Lys Gln Leu His  
                                  1685                      1690                      1695  
 Arg Cys Pro Asp Leu Ser Asn Phe Gln Gln Lys Ile Ser Ser Val Leu



|   |      |      |      |      |      |
|---|------|------|------|------|------|
|   | 1700 |      | 1705 |      | 1710 |
| Ser Tyr Asn Glu Lys Leu Leu Lys Glu Lys Glu Ala Leu Ser Glu Glu |      |      |      |      |      |
|   | 1715 |      | 1720 |      | 1725 |
| Leu Asn Ser Cys Val Asp Lys Leu Ala Lys Ser Ser Leu Leu Glu His |      |      |      |      |      |
|   | 1730 |      | 1735 |      | 1740 |
| Arg Ile Ala Thr Met Lys Gln Glu Gln Lys Ser Trp Glu His Gln Ser |      |      |      |      |      |
| 1745  |      | 1750 |      | 1755 | 1760 |
| Ala Ser Leu Lys Thr Gln Leu Val Ala Ser Gln Glu Lys Val Gln Asn |      |      |      |      |      |
|   | 1765 |      | 1770 |      | 1775 |
| Leu Glu Asp Thr Val Gln Asn Val Asn Leu Gln Met Ser Arg Met Lys |      |      |      |      |      |
|   | 1780 |      | 1785 |      | 1790 |
| Ser Asp Pro Arg Val Thr Gln Gln Glu Lys Glu Ala Leu Lys Gln Glu |      |      |      |      |      |
|   | 1795 |      | 1800 |      | 1805 |
| Val Met Pro Leu His Lys Gln Leu Gln Asn Ser Val Xaa Lys Ser Trp |      |      |      |      |      |
|   | 1810 |      | 1815 |      | 1820 |
| Ala Pro Glu Ile Ala Thr His Pro Ser Gly Leu His Asn Gln Gln Lys |      |      |      |      |      |
| 1825  |      | 1830 |      | 1835 | 1840 |
| Arg Leu Ser Trp Asp Lys Leu Asp His Leu Met Asn Glu Glu Gln Gln |      |      |      |      |      |
|   | 1845 |      | 1850 |      | 1855 |
| Leu Leu Trp Gln Glu Asn Glu Arg Leu Gln Thr Met Val Gln Asn Thr |      |      |      |      |      |
|   | 1860 |      | 1865 |      | 1870 |
| Lys Ala Glu Leu Thr His Ser Arg Glu Lys Val Arg Gln Leu Glu Ser |      |      |      |      |      |
|   | 1875 |      | 1880 |      | 1885 |
| Asn Leu Leu Pro Lys His Gln Lys His Leu Asn Pro Ser Gly Thr Met |      |      |      |      |      |
|   | 1890 |      | 1895 |      | 1900 |
| Asn Pro Thr Glu Gln Glu Lys Leu Ser Leu Lys Arg Glu Cys Asp Gln |      |      |      |      |      |
| 1905  |      | 1910 |      | 1915 | 1920 |
| Phe Gln Lys Glu Gln Ser Pro Ala Asn Arg Lys Val Ser Gln Met Asn |      |      |      |      |      |
|   | 1925 |      | 1930 |      | 1935 |
| Ser Leu Glu Gln Glu Leu Glu Thr Ile His Leu Glu Asn Glu Gly Leu |      |      |      |      |      |
|   | 1940 |      | 1945 |      | 1950 |
| Lys Lys Lys Gln Val Lys Leu Asp Glu Gln Leu Met Glu Met Gln His |      |      |      |      |      |
|   | 1955 |      | 1960 |      | 1965 |
| Leu Arg Ser Thr Ala Thr Pro Ser Pro Ser Pro His Ala Trp Asp Leu |      |      |      |      |      |
|   | 1970 |      | 1975 |      | 1980 |
| Gln Leu Leu Gln Gln Gln Ala Cys Pro Met Val Pro Arg Glu Gln Phe |      |      |      |      |      |
| 1985  |      | 1990 |      | 1995 | 2000 |
| Leu Gln Leu Gln Arg Gln Leu Leu Gln Ala Glu Arg Ile Asn Gln His |      |      |      |      |      |
|   | 2005 |      | 2010 |      | 2015 |
| Leu Gln Glu Glu Leu Glu Asn Arg Thr Ser Glu Thr Asn Thr Pro Gln |      |      |      |      |      |
|   | 2020 |      | 2025 |      | 2030 |
| Gly Asn Gln Glu Gln Leu Val Thr Val Met Glu Glu Arg Met Ile Glu |      |      |      |      |      |
|   | 2035 |      | 2040 |      | 2045 |
| Val Glu Gln Lys Leu Lys Leu Val Lys Arg Leu Leu Gln Glu Lys Val |      |      |      |      |      |
|   | 2050 |      | 2055 |      | 2060 |
| Asn Gln Leu Lys Glu Gln Val Ser Leu Pro Gly His Leu Cys Ser Pro |      |      |      |      |      |
| 2065  |      | 2070 |      | 2075 | 2080 |
| Thr Ser His Ser Ser Phe Asn Ser Ser Phe Thr Ser Leu Tyr Cys His |      |      |      |      |      |
|   | 2085 |      | 2090 |      | 2095 |

&lt;210&gt; 2713

&lt;211&gt; 2066

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2713

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 2040  
 aaaaaaaaaa aaaaaaaaaa aaaaaa  
 2066

&lt;210&gt; 2714

&lt;211&gt; 214

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2714

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Glu | Leu | Ala | Ala | Gly | Ser | Phe | Ser | Glu | Glu | Gln | Phe | Trp | Glu | Ala |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Cys | Ala | Glu | Leu | Gln | Gln | Pro | Ala | Leu | Ala | Gly | Ala | Asp | Trp | Gln | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Leu | Val | Glu | Thr | Ser | Gly | Ile | Ser | Ile | Tyr | Arg | Leu | Leu | Asp | Lys | Lys |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |
| Thr | Gly | Leu | Tyr | Glu | Tyr | Lys | Val | Phe | Gly | Val | Leu | Glu | Asp | Cys | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Pro | Thr | Leu | Leu | Ala | Asp | Ile | Tyr | Met | Asp | Ser | Asp | Tyr | Arg | Lys | Gln |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Trp | Asp | Gln | Tyr | Val | Lys | Glu | Leu | Tyr | Glu | Gln | Glu | Cys | Asn | Gly | Glu |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Thr | Val | Val | Tyr | Trp | Glu | Val | Lys | Tyr | Pro | Phe | Pro | Met | Ser | Asn | Arg |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Asp | Tyr | Val | Tyr | Leu | Arg | Gln | Arg | Arg | Asp | Leu | Asp | Met | Glu | Gly | Arg |
|     |     | 115 |     |     |     | 120 |     |     |     |     |     | 125 |     |     |     |
| Lys | Ile | His | Val | Ile | Leu | Ala | Arg | Ser | Thr | Ser | Met | Pro | Gln | Leu | Gly |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Glu | Arg | Ser | Gly | Val | Ile | Arg | Val | Lys | Gln | Tyr | Lys | Gln | Ser | Leu | Ala |
| 145 |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |     |
| Ile | Glu | Ser | Asp | Gly | Lys | Lys | Gly | Ser | Lys | Val | Phe | Met | Tyr | Tyr | Phe |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Asp | Asn | Pro | Gly | Gly | Gln | Ile | Pro | Ser | Trp | Leu | Ile | Asn | Trp | Ala | Ala |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     | 190 |     |     |     |
| Lys | Asn | Gly | Val | Pro | Asn | Phe | Leu | Lys | Asp | Met | Ala | Arg | Ala | Cys | Gln |
|     |     | 195 |     |     |     | 200 |     |     |     |     |     | 205 |     |     |     |
| Asn | Tyr | Leu | Lys | Lys | Thr |     |     |     |     |     |     |     |     |     |     |
| 210 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

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 <212> DNA  
 <213> Homo sapiens

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 120  
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 180  
 aatggtgttg gaggcagtcc ccctaagtcc aagttactgt ttagtaacac agcagctcaa  
 240  
 aaattaagag gaatggatga agtatacaac ctcttctatg tcaacaacaa ctggtatatt  
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 360  
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 378

<210> 2716  
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 <212> PRT  
 <213> Homo sapiens

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 Gln Arg Gly Asp Leu Ser Asp Val Glu Glu Glu Glu Glu Glu Met  
 35 40 45  
 Asp Val Asp Glu Ala Thr Gly Ala Val Lys Lys His Asn Gly Val Gly  
 50 55 60  
 Gly Ser Pro Pro Lys Ser Lys Leu Leu Phe Ser Asn Thr Ala Ala Gln  
 65 70 75 80  
 Lys Leu Arg Gly Met Asp Glu Val Tyr Asn Leu Phe Tyr Val Asn Asn  
 85 90 95  
 Asn Trp Tyr Ile Phe Met Arg Leu His Gln Ile Leu Cys Leu Arg Leu  
 100 105 110  
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 115 120 125

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 <212> DNA  
 <213> Homo sapiens

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 120

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180  
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240  
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300  
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540  
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<211> 508

<212> PRT

<213> Homo sapiens

<400> 2722

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| Ser | Asn | Trp | Gln | Asp | Lys | Ser | Met | Gly | Cys | Glu | Asn | Gly | His | Val | Pro |
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| Leu | Tyr | Ser | Ser | Ser | Ser | Val | Pro | Thr | Thr | Ile | Asn | Thr | Ile | Gly | Thr |
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| Leu | Thr | Glu | Cys | Gln | Leu | Glu | Ala | Gln | Asn | Val | Thr | Lys | Gly | Ala | Arg |
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&lt;211&gt; 404

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| Leu | Ile | Arg | Gln | Tyr | Asp | Leu | Arg | Glu | Asn | Ser | Lys | His | Ser | Glu | Val |
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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Leu | Thr | Val | Asn | Pro | Gln | Asp | Asn | Asn | Cys | Leu | Ala | Val | Gly | Ala | Ser |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Gly | Pro | Phe | Val | Arg | Leu | Tyr | Asp | Ile | Arg | Met | Ile | His | Asn | His | Arg |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Lys | Ser | Met | Lys | Gln | Ser | Pro | Ser | Ala | Gly | Val | His | Thr | Phe | Cys | Asp |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Arg | Gln | Lys | Pro | Leu | Pro | Asp | Gly | Ala | Ala | Gln | Tyr | Tyr | Val | Ala | Gly |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| His | Leu | Pro | Val | Lys | Leu | Pro | Asp | Tyr | Asn | Asn | Arg | Leu | Arg | Val | Leu |
| 145 |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     |     | 160 |
| Val | Ala | Thr | Tyr | Val | Thr | Phe | Ser | Pro | Asn | Gly | Thr | Glu | Leu | Leu | Val |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Asn | Met | Gly | Gly | Glu | Gln | Val | Tyr | Leu | Phe | Asp | Leu | Thr | Tyr | Lys | Gln |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Arg | Pro | Tyr | Thr | Phe | Leu | Leu | Pro | Arg | Lys | Cys | His | Ser | Ser | Gly | Glu |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Val | Gln | Asn | Gly | Lys | Met | Ser | Thr | Asn | Gly | Val | Ser | Asn | Gly | Val | Ser |
|     |     | 210 |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Asn | Gly | Leu | His | Leu | His | Ser | Asn | Gly | Phe | Arg | Leu | Pro | Glu | Ser | Arg |
| 225 |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     |     | 240 |
| Gly | His | Val | Ser | Pro | Gln | Val | Glu | Leu | Pro | Pro | Tyr | Leu | Glu | Arg | Val |
|     |     |     | 245 |     |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Lys | Gln | Gln | Ala | Asn | Glu | Ala | Phe | Ala | Cys | Gln | Gln | Trp | Thr | Gln | Ala |
|     |     | 260 |     |     |     |     |     | 265 |     |     |     |     | 270 |     |     |
| Ile | Gln | Leu | Tyr | Ser | Lys | Ala | Val | Gln | Arg | Ala | Pro | His | Asn | Ala | Met |
|     |     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |
| Leu | Tyr | Gly | Asn | Arg | Ala | Ala | Ala | Tyr | Met | Lys | Arg | Lys | Trp | Asp | Gly |
|     |     | 290 |     |     | 295 |     |     |     |     |     | 300 |     |     |     |     |
| Asp | His | Tyr | Asp | Ala | Leu | Arg | Asp | Cys | Leu | Lys | Ala | Ile | Ser | Leu | Asn |
| 305 |     |     |     | 310 |     |     |     |     | 315 |     |     |     |     |     | 320 |
| Pro | Cys | His | Leu | Lys | Ala | His | Phe | Arg | Leu | Ala | Arg | Cys | Leu | Phe | Glu |
|     |     |     | 325 |     |     |     |     |     | 330 |     |     |     |     | 335 |     |
| Leu | Lys | Tyr | Val | Ala | Glu | Ala | Leu | Glu | Cys | Leu | Asp | Asp | Phe | Lys | Gly |
|     |     | 340 |     |     |     |     |     | 345 |     |     |     |     | 350 |     |     |
| Lys | Phe | Pro | Glu | Gln | Ala | His | Ser | Ser | Ala | Cys | Asp | Ala | Leu | Gly | Arg |
|     |     | 355 |     |     |     |     | 360 |     |     |     |     | 365 |     |     |     |
| Asp | Ile | Thr | Ala | Ala | Leu | Phe | Ser | Lys | Asn | Asp | Gly | Glu | Glu | Lys | Lys |
|     |     | 370 |     |     |     | 375 |     |     |     |     | 380 |     |     |     |     |
| Gly | Pro | Gly | Gly | Gly | Ala | Pro | Val | Arg | Leu | Arg | Ser | Thr | Ser | Arg | Lys |
| 385 |     |     |     |     | 390 |     |     |     |     | 395 |     |     |     |     | 400 |
| Gly | Cys | Thr | Arg |     |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 2725

&lt;211&gt; 856

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2725

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60

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120

aagggttctta aagaagtcag ggtgcaggat gagaacaacg tttgttttga gtgtggcgcg  
180  
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720  
acccatagag ctgtctcaga tagcgcccca ggtaagctcc gcacgccttc cagggtgtga  
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856

<210> 2726

<211> 148

<212> PRT

<213> Homo sapiens

<400> 2726

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Ser | Pro | Arg | Thr | Arg | Lys | Val | Leu | Lys | Glu | Val | Arg | Val | Gln |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     | 15  |     |     |     |
| Asp | Glu | Asn | Asn | Val | Cys | Phe | Glu | Cys | Gly | Ala | Phe | Asn | Pro | Gln | Trp |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |     |
| Val | Ser | Val | Thr | Tyr | Gly | Ile | Trp | Ile | Cys | Leu | Glu | Cys | Ser | Gly | Arg |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| His | Arg | Gly | Leu | Gly | Val | His | Leu | Ser | Phe | Val | Arg | Ser | Val | Thr | Met |
|     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |
| Asp | Lys | Trp | Lys | Asp | Ile | Glu | Leu | Glu | Lys | Met | Lys | Ala | Gly | Gly | Asn |
| 65  |     |     |     | 70  |     |     |     | 75  |     |     |     |     |     | 80  |     |
| Ala | Lys | Phe | Arg | Glu | Phe | Leu | Glu | Ser | Gln | Glu | Asp | Tyr | Asp | Pro | Cys |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Trp | Ser | Leu | Gln | Glu | Lys | Tyr | Asn | Ser | Arg | Ala | Ala | Ala | Leu | Phe | Arg |
|     |     | 100 |     |     |     |     | 105 |     |     |     |     |     | 110 |     |     |
| Asp | Lys | Val | Val | Ala | Leu | Ala | Glu | Gly | Arg | Glu | Trp | Ser | Leu | Glu | Ser |
|     |     | 115 |     |     |     | 120 |     |     |     |     |     | 125 |     |     |     |
| Ser | Pro | Ala | Gln | Asn | Trp | Thr | Pro | Pro | Gln | Pro | Arg | Thr | Leu | Pro | Ser |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Met | Val | His | Arg |     |     |     |     |     |     |     |     |     |     |     |     |
| 145 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

<210> 2727  
 <211> 1119  
 <212> DNA  
 <213> Homo sapiens

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 120  
 taaatctggg atattaaatt gtgctgtaaa tagatttgta tattttcttt ttgagtact  
 180  
 atgatagggtg aaatgggatg actataaaaa ggatttggtt ctttttgtct cctggaatga  
 240  
 catgatgcct ttctagagaa agaaaaattg caggctacag gaaaatgata aaaactactg  
 300  
 gattcattta gactattcga tttaggaagg tacaaccact tctttaacat caagctaaaa  
 360  
 gtgggggaaa gtctcagtct cccaggtagg tctcctctca cactgtcctg ggtggcaggc  
 420  
 gctgtttata catgcccgtc atcgctctgg ctgcactgta gatcatctgc cgacgggaca  
 480  
 tcccagtaaa tgccatgtgc caatcagtcg ggctgacatt cagtaaaactc ttttccagga  
 540  
 cttcacccac tgtcaccaaa aggcctgacc acctcagatt atagtcctgg ggagttagac  
 600  
 tttgagcctg ctgtacaaat tccaaaggca ctggtgtggc ttgtgtaaat gtttctagat  
 660  
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 720  
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 780  
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 960  
 ccagttcacc tccagatttg atatagggag ccatgccagg gtccagcgtt gtaatcatgc  
 1020  
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 1080  
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 1119

<210> 2728  
 <211> 221  
 <212> PRT  
 <213> Homo sapiens

<400> 2728  
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 Ile Thr Thr Leu Asp Pro Gly Met Ala Pro Tyr Ile Lys Ser Gly Gly



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<212> DNA
<213> Homo sapiens
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<210> 2730
<211> 92
<212> PRT
<213> Homo sapiens
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**1970**

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      20           25           30
Leu Asp Gln Cys Ala Glu Asp Phe Arg Glu Pro Pro His Phe Pro Cys
      35           40           45
Leu Gln Lys Leu Leu Asp Tyr Leu Thr Arg Met Met Pro Gly Ser Asp
      50           55           60
Pro Glu Arg Arg Ala Gln Asn Leu Leu Glu Gln Phe Gln Lys Gln Glu
      65           70           75           80
Val Glu Thr Asp Asn Gly Leu Pro Asn Thr Ile Ser
      85           90

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&lt;210&gt; 2731

&lt;211&gt; 447

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2731

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aatggctgat aagcagatca gcctgccagc caagctcatc aatggcggca tcgcgggctg
120
atcggtgtca cctgcgtgtt tcccatcgac ctggccaaga ccaggctgca gaaccagcag
180
aacggccagc gcgtgtacac gagcatgtcc gactgcctca tcaagaccgt ccgctccgag
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420
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447

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&lt;210&gt; 2732

&lt;211&gt; 125

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2732

```

Ala Asp Gln Pro Ala Ser Gln Ala His Gln Trp Arg His Arg Gly Leu
      1           5           10           15
Ile Gly Val Thr Cys Val Phe Pro Ile Asp Leu Ala Lys Thr Arg Leu
      20           25           30
Gln Asn Gln Gln Asn Gly Gln Arg Val Tyr Thr Ser Met Ser Asp Cys
      35           40           45
Leu Ile Lys Thr Val Arg Ser Glu Gly Tyr Phe Gly Met Tyr Arg Gly
      50           55           60
Ala Ala Val Asn Leu Thr Leu Val Thr Pro Glu Lys Ala Ile Lys Leu
      65           70           75           80
Ala Ala Asn Asp Phe Phe Arg His Gln Leu Ser Lys Asp Gly Gln Lys
      85           90           95
Leu Thr Leu Leu Lys Glu Met Leu Ala Gly Cys Gly Ala Gly Thr Cys

```

|     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|
|     | 100 |     | 105 |     | 110 |
| Gln | Val | Ile | Val | Thr | Thr |
|     |     |     | Pro | Met | Glu |
|     |     |     | Met | Leu | Lys |
|     |     |     |     | Ile |     |
|     | 115 |     | 120 |     | 125 |

<210> 2733  
 <211> 3619  
 <212> DNA  
 <213> Homo sapiens

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 120  
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 180  
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 240  
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 360  
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 480  
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 720  
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 900  
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 3619

&lt;210&gt; 2734

&lt;211&gt; 790

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2734

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Glu | Arg | Ile | Lys | Glu | Asp | Arg | Pro | Ile | Thr | Ile | Lys | Asp | Asp | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Gly | Asn | Leu | Asn | Arg | Cys | Ile | Ala | Asp | Val | Val | Ser | Leu | Phe | Ile | Thr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Val | Met | Asp | Lys | Leu | Arg | Leu | Ala | Glu | Leu | Thr | Val | Asp | Glu | Phe | Leu |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Ala | Ser | Gly | Phe | Asp | Ser | Glu | Ser | Glu | Ser | Glu | Ser | Glu | Asn | Ser | Pro |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Gln | Ala | Glu | Thr | Arg | Glu | Ala | Arg | Glu | Ala | Ala | Arg | Ser | Pro | Asp | Lys |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |
| Pro | Gly | Gly | Ser | Pro | Ser | Ala | Ser | Arg | Arg | Lys | Gly | Arg | Ala | Ser | Glu |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| His | Lys | Asp | Gln | Leu | Ser | Arg | Leu | Lys | Asp | Arg | Asp | Pro | Glu | Phe | Tyr |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     | 110 |     |     |     |
| Lys | Phe | Leu | Gln | Glu | Asn | Asp | Gln | Ser | Leu | Leu | Asn | Phe | Ser | Asp | Ser |
|     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |     |
| Asp | Ser | Ser | Glu | Glu | Glu | Glu | Gly | Pro | Phe | His | Ser | Leu | Pro | Asp | Val |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Leu | Glu | Glu | Ala | Ser | Glu | Glu | Glu | Asp | Gly | Ala | Glu | Glu | Gly | Glu | Asp |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Gly | Asp | Arg | Val | Pro | Arg | Gly | Leu | Lys | Gly | Lys | Lys | Asn | Ser | Val | Pro |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Val | Thr | Val | Ala | Met | Val | Glu | Arg | Trp | Lys | Gln | Ala | Ala | Lys | Gln | Arg |

**1975**

|   |     |     |
|---|-----|-----|
| 610   | 615 | 620 |
| Glu Gln Gln Ala Val Glu Ala Trp Glu Lys Leu Thr Arg Glu Glu Gly |     |     |
| 625   | 630 | 635 |
| Thr Pro Leu Thr Leu Tyr Tyr Ser His Trp Arg Lys Leu Arg Asp Arg |     |     |
|   | 645 | 650 |
| Glu Ile Gln Leu Glu Ile Ser Gly Lys Glu Arg Val Arg Leu Gly Glu |     |     |
|   | 660 | 665 |
| Gly Thr Trp Leu Glu Asp Leu Asn Phe Pro Glu Ile Lys Arg Arg Lys |     |     |
|   | 675 | 680 |
| Met Ala Asp Arg Lys Asp Glu Asp Arg Lys Gln Phe Lys Asp Leu Phe |     |     |
|   | 690 | 695 |
| Asp Leu Asn Ser Ser Glu Glu Asp Asp Thr Glu Gly Phe Leu Glu Arg |     |     |
|   | 705 | 710 |
| Gly Ile Leu Gly Pro Leu Ser Thr Arg His Gly Val Glu Asp Asp Glu |     |     |
|   | 725 | 730 |
| Glu Asp Glu Glu Glu Gly Glu Glu Asp Ser Ser Asn Ser Glu Gly Glu |     |     |
|   | 740 | 745 |
| Trp Ser Trp Asp Gly Asp Pro Asp Ala Glu Ala Gly Leu Ala Pro Gly |     |     |
|   | 755 | 760 |
| Glu Leu Gln Gln Leu Ala Gln Gly Pro Glu Asp Glu Leu Glu Asp Leu |     |     |
|   | 770 | 775 |
| Gln Leu Ser Glu Asp Asp   |     |     |
|   | 785 | 790 |

&lt;210&gt; 2735

&lt;211&gt; 1666

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2735

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60
ccgcagttcc cggccccgct ggccccagtc atggcgaagc agtacgatgt gctgttccgg
120
ctgctgctga tcggggactc cggggtgggc aagacctgcc tgctgtgccg cttcaccgac
180
aacgagttcc actcctcgca catctccacc atcgggtgtg actttaagat gaagaccata
240
gaggtagacg gcatcaaagt gcggatacag atctgggaca ctgcagggca ggagagatac
300
cagaccatca caaagcagta ctatcggcgg gccaggggga tatttttggc ctatgacatt
360
agcagcgagc gctcttacca gcacatcatg aagtgggtca gtgacgtgga tgagtacgca
420
ccagaaggcg tccagaagat ccttattggg aataaggctg atgaggagca gaaacggcag
480
gtgggaagag agcaagggca gcagaaatgt ccttctcttc agctggcgaa ggagtatggc
540
atggacttct atgaaacaag tgctgcacc aacctcaaca ttaaagagtc attcacgcgt
600
ctgacagagc tgggtctgca ggcccatagg aaggagctgg aaggcctccg gatgctgccc
660
agcaatgagt tggcactggc agagctggag gaggaggagg gcaaaccgca gggcccagcg
720

```

aactcttcga aaacctgctg gtgctgagtc ctgtgtgggg caccacacac gacacccctc  
780  
ttccctcagg aggcccgctg gcagacaggg gagccggggc ttgcccctgc tgctgtcctc  
840  
tcgtgtgatg accctattga gtatcagtag ccactactcc ccctgacctg ccctgagagc  
900  
ggctctgctg tcctctcaag cagccctgt cccagcccg tccacctgg agtggctctc  
960  
ttcagcctgt tccccagcc acaggcctgc tacgaccccc acgatgtgcc gcaagcactg  
1020  
tctcaccatc ccgcacccac cagacaacag ccagggctgg agtccaggcc actttcagct  
1080  
gtctctttct ccgtgcctcg tgtctcttct ctgcttttct tctcttcccc caattctctt  
1140  
tctctgacct ctccccctcg gtgcgtttcg tatcaaagct cctcaaacc cgcccccg  
1200  
gtgtctgct gtgtgcagct cgctctttcc ttccttcta agctatccaa ggggatggac  
1260  
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1320  
gggtggccaa aggctacagg gtgcttcttc ctcttcccc accccactg tccctcatgt  
1380  
gccatgggcc tgctccccca gtgacctgcg aaagtggagc atcgaggtag gagggaaacg  
1440  
gcaaccaggg agtcctcgag cctggggctg ccctacctct accattccc cgaccagagc  
1500  
tttgccttg cttggctgcc cgctgcctc tttggggaac tgagctcgga ggcagggtgt  
1560  
tcagagaagg aaacaaaatg aggggtggca gggataaaaa gtcacctcca ttctctacct  
1620  
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1666

<210> 2736

<211> 218

<212> PRT

<213> Homo sapiens

<400> 2736

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Lys | Gln | Tyr | Asp | Val | Leu | Phe | Arg | Leu | Leu | Leu | Ile | Gly | Asp |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ser | Gly | Val | Gly | Lys | Thr | Cys | Leu | Leu | Cys | Arg | Phe | Thr | Asp | Asn | Glu |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Phe | His | Ser | Ser | His | Ile | Ser | Thr | Ile | Gly | Val | Asp | Phe | Lys | Met | Lys |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Thr | Ile | Glu | Val | Asp | Gly | Ile | Lys | Val | Arg | Ile | Gln | Ile | Trp | Asp | Thr |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Ala | Gly | Gln | Glu | Arg | Tyr | Gln | Thr | Ile | Thr | Lys | Gln | Tyr | Tyr | Arg | Arg |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Ala | Gln | Gly | Ile | Phe | Leu | Val | Tyr | Asp | Ile | Ser | Ser | Glu | Arg | Ser | Tyr |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Gln | His | Ile | Met | Lys | Trp | Val | Ser | Asp | Val | Asp | Glu | Tyr | Ala | Pro | Glu |
|     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |     |
| Gly | Val | Gln | Lys | Ile | Leu | Ile | Gly | Asn | Lys | Ala | Asp | Glu | Glu | Gln | Lys |



|   |     |     |
|---|-----|-----|
| 115   | 120 | 125 |
| Arg Gln Val Gly Arg Glu Gln Gly Gln Gln Lys Cys Pro Ser Leu Gln |     |     |
| 130   | 135 | 140 |
| Leu Ala Lys Glu Tyr Gly Met Asp Phe Tyr Glu Thr Ser Ala Cys Thr |     |     |
| 145   | 150 | 155 |
| Asn Leu Asn Ile Lys Glu Ser Phe Thr Arg Leu Thr Glu Leu Val Leu |     |     |
| 165   | 170 | 175 |
| Gln Ala His Arg Lys Glu Leu Glu Gly Leu Arg Met Arg Ala Ser Asn |     |     |
| 180   | 185 | 190 |
| Glu Leu Ala Leu Ala Glu Leu Glu Glu Glu Glu Gly Lys Pro Glu Gly |     |     |
| 195   | 200 | 205 |
| Pro Ala Asn Ser Ser Lys Thr Cys Trp Cys                         |     |     |
| 210   | 215 |     |

&lt;210&gt; 2737

&lt;211&gt; 898

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2737

```

nnaccggtat gcgccacctg cgccggggttt ggcggccgat gtcaccggca ccgcatccgc
60
cgagcggagg agcacgctga ggagctgcgg aacaagattg tggaccagtg tgagaggctg
120
cagttacaga gtgctgccat caccaagtat gtggcggacg tcctgccggg gaagaatcaa
180
agagcagtga gcatggccag tgcagcgagg gaactgggta tccagcgggtt gagtctgggtg
240
aggagtcttt gcgagagcga ggagcagcgg ttactggaac aggtgcatgg cgaagaggag
300
cgggcccacc agagcatcct gacacagcgg gtgcactggg ccgaggcgct gcagaaactt
360
gacaccatcc gcaactggcct ggtgggcatg cttactcacc tggatgacct ccagctgatt
420
cagaaggagc aagagatttt cgagaggacc gaagaagcag agggcatttt ggatccccag
480
gagtcggaaa tggttaaactt taatgagaag tgcactcgga gccactact gacccaactc
540
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600
acagtcagcc ccttcctgca attgtcagat gatcgaaaga ccctgacctc agcaccaaga
660
agtcaaaggt gtgcagatgg cccggagcgc ttcgaccact ggcccaatgc cctggctgcc
720
acctccttcc agaatgggct ccatgcctgg atggtgaatg tccagaacag ttgtgcctat
780
aagggtggcg tggcttcagg ccacctgccc cgcaagggtt ctggcagtga ctgccgtctg
840
ggccacaatg ccttctcctg ggtcttctct cgctatgatc aggagtttcg tttctcac
898

```

&lt;210&gt; 2738

&lt;211&gt; 299

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2738

```

Xaa Pro Val Cys Ala Thr Cys Ala Gly Phe Gly Gly Arg Cys His Arg
 1           5           10           15
His Arg Ile Arg Arg Ala Glu Glu His Ala Glu Glu Leu Arg Asn Lys
 20           25           30
Ile Val Asp Gln Cys Glu Arg Leu Gln Leu Gln Ser Ala Ala Ile Thr
 35           40           45
Lys Tyr Val Ala Asp Val Leu Pro Gly Lys Asn Gln Arg Ala Val Ser
 50           55           60
Met Ala Ser Ala Ala Arg Glu Leu Val Ile Gln Arg Leu Ser Leu Val
 65           70           75           80
Arg Ser Leu Cys Glu Ser Glu Glu Gln Arg Leu Leu Glu Gln Val His
 85           90           95
Gly Glu Glu Glu Arg Ala His Gln Ser Ile Leu Thr Gln Arg Val His
100           105           110
Trp Ala Glu Ala Leu Gln Lys Leu Asp Thr Ile Arg Thr Gly Leu Val
115           120           125
Gly Met Leu Thr His Leu Asp Asp Leu Gln Leu Ile Gln Lys Glu Gln
130           135           140
Glu Ile Phe Glu Arg Thr Glu Glu Ala Glu Gly Ile Leu Asp Pro Gln
145           150           155           160
Glu Ser Glu Met Leu Asn Phe Asn Glu Lys Cys Thr Arg Ser Pro Leu
165           170           175
Leu Thr Gln Leu Trp Ala Thr Ala Val Leu Gly Ser Leu Ser Gly Thr
180           185           190
Glu Asp Ile Arg Ile Asp Glu Arg Thr Val Ser Pro Phe Leu Gln Leu
195           200           205
Ser Asp Asp Arg Lys Thr Leu Thr Ser Ala Pro Arg Ser Gln Arg Cys
210           215           220
Ala Asp Gly Pro Glu Arg Phe Asp His Trp Pro Asn Ala Leu Ala Ala
225           230           235           240
Thr Ser Phe Gln Asn Gly Leu His Ala Trp Met Val Asn Val Gln Asn
245           250           255
Ser Cys Ala Tyr Lys Val Gly Val Ala Ser Gly His Leu Pro Arg Lys
260           265           270
Gly Ser Gly Ser Asp Cys Arg Leu Gly His Asn Ala Phe Ser Trp Val
275           280           285
Phe Ser Arg Tyr Asp Gln Glu Phe Arg Phe Ser
290           295

```

&lt;210&gt; 2739

&lt;211&gt; 1501

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2739

```

gagagccgcc gagagtgggg ggcgatggcg aagctccggg tggcttacga gtacacggaa
60
gccgaggaca agagcatccg gctcggcttg tttctcatca tctccggcgt cgtgtcgctc
120
ttcatcttcg gcttctgctg gctgagtcgc gcgctgcagg atctgcaagc cacggaggcc
180

```

aattgcacgg tgctgtcggg gcagcagatc ggcgaggtgt tcgagtgcac cttcacctgt  
240  
ggcgccgact gcaggggcac ctgcgagtac ccctgcgtcc aggtctacgt gaacaactct  
300  
gagtccaact ctagggcgct gctgcacagc gacgagcacc agctcctgac caacccaag  
360  
tgctcctata tccctccctg taagagagaa aatcagaaga atttgaaaag tgtcatgaat  
420  
tggcaacagt actggaaaga tgagattggg tcccagccat ttacttgcta ttttaatcaa  
480  
catcaaagac cagatgatgt gcttctgcat cgcactcatg atgagattgt cctcctgcat  
540  
tgcttctctt ggcccctggg gacatttggt gtgggcgttc tcattgtggg cctgaccatc  
600  
tgtgccaaga gcttggcggg caaggcggaa gccatgaaga agcgcaagtt ctcttaaagg  
660  
ggaaggaggc ttgtagaaag caaagtacag aagctgtact catcggcacg cgtccacctg  
720  
cggaacctgt gtttcttggc gcaggagatg gacagggcca cgacagggtc ctgagaggct  
780  
catccctcag tggcaacaga aacaggcaca actggaagac ttggaacctc aaagcttgta  
840  
ttccatctgc tgtagcaatg gctaaagggt caagatctta gctgtatgga gtaactatct  
900  
cagaaaaccc tataagaagt tcattttctt tcaaaagtaa cagtatatta tttgtacagt  
960  
gtagtataca aaccattatg atttatgcta cttaaaaata ttaaaataga gtgggtctgtg  
1020  
ttattttcta tttccttttt tatgcttaga acaccagggt tttaaaaaaa aaaaagggtg  
1080  
aggacatctg ggtctcatct gcttctgcta gggtaaactt ttacttgaca acaaggattc  
1140  
ctgctgaagt ctgaacctta ctgtgtaacc ctcagtttcc actattaaag agtatctttt  
1200  
gacgtcctgc ttggaaaatg aatagtatac tggtaactca gtctccagtc acctctgtgt  
1260  
ctcttaagca agagattcta aaagattggg aaaacatata ctccaaaacc tgcctttgcc  
1320  
taaccattat ttttcaccag attacttctt aagagaggga ggtgattctg aagaaggctt  
1380  
ctatctcaaa aagcactggg cttccttatt catctgttct tggtgttttt gacggagtta  
1440  
aaaaagtttg tgtgcaatac aatataaatg atgtgaagga cactcttaaa aaaaaaaaaa  
1500  
a  
1501

&lt;210&gt; 2740

&lt;211&gt; 218

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2740

Glu Ser Arg Arg Glu Trp Gly Ala Met Ala Lys Leu Arg Val Ala Tyr

```

      1           5           10           15
Glu Tyr Thr Glu Ala Glu Asp Lys Ser Ile Arg Leu Gly Leu Phe Leu
      20           25           30
Ile Ile Ser Gly Val Val Ser Leu Phe Ile Phe Gly Phe Cys Trp Leu
      35           40           45
Ser Pro Ala Leu Gln Asp Leu Gln Ala Thr Glu Ala Asn Cys Thr Val
      50           55           60
Leu Ser Val Gln Gln Ile Gly Glu Val Phe Glu Cys Thr Phe Thr Cys
      65           70           75           80
Gly Ala Asp Cys Arg Gly Thr Ser Gln Tyr Pro Cys Val Gln Val Tyr
      85           90           95
Val Asn Asn Ser Glu Ser Asn Ser Arg Ala Leu Leu His Ser Asp Glu
      100          105          110
His Gln Leu Leu Thr Asn Pro Lys Cys Ser Tyr Ile Pro Pro Cys Lys
      115          120          125
Arg Glu Asn Gln Lys Asn Leu Glu Ser Val Met Asn Trp Gln Gln Tyr
      130          135          140
Trp Lys Asp Glu Ile Gly Ser Gln Pro Phe Thr Cys Tyr Phe Asn Gln
      145          150          155          160
His Gln Arg Pro Asp Asp Val Leu Leu His Arg Thr His Asp Glu Ile
      165          170          175
Val Leu Leu His Cys Phe Leu Trp Pro Leu Val Thr Phe Val Val Gly
      180          185          190
Val Leu Ile Val Val Leu Thr Ile Cys Ala Lys Ser Leu Ala Val Lys
      195          200          205
Ala Glu Ala Met Lys Lys Arg Lys Phe Ser
      210          215

```

&lt;210&gt; 2741

&lt;211&gt; 1487

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2741

```

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60
ttggatctgc agaacctcat tgattttggc cagaaaaagt ttagctgctg tggagggatt
120
tcctacaagg actggtctca gaacatgtat ttcaactgct cagaagacaa ccccagtcga
180
gagcgctgct ctgtgcctta ctctgtttgc ttgcctactc ctgaccaggc agtgatcaac
240
actatgtgtg gccaaaggat gcaggccttt gactacttgg aagctagcaa agtcatctac
300
accaatggct gtattgacaa gttggtcaac tggatacaca gcaacctatt cttacttggg
360
ggtgtggctc taggcctggc catccccag ctggtgggaa ttctgctgtc ccagatccta
420
gtgaatcaga tcaaagatca gatcaagcta cagctctaca accagcagca ccgggctgac
480
ccatggtact gagaatccat cctgcacctc ctcacatgg aaactggcaa gcctcataaa
540
cgaacagcag tgggtgctga aagcagcacc aaatggagat ttggattcca gccccccagt
600

```

gacagcccag tgggaagaag caaactccag atgggcagaa ggcaggggtgc acaggtggct  
 660  
 ccagtctcag gaggatgcgc ctctctcccc ccatcccagc cctcagcatt gtgccagagt  
 720  
 gataccctta agtggttggg tttatgtttt cagttttgtt tgggaaacag cagttgcaca  
 780  
 gagagttggg ggtactgctg ctgccttttc accgaggcac tgccaccacc agctctagca  
 840  
 gggatgctcc tgagcttggc ggacatactt agatcctaac gtgccagtga gacctggctg  
 900  
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 960  
 ggaagggagt ggagcaggca gtgaggagag agcctggggg tcggctgggg acagccgtat  
 1020  
 gtgctaggtg ggagtggagg gagatatgtt taccaaatgc ctgtcctgcc atcctcccag  
 1080  
 gtagtcagag tgagctacat cctgccccgc cttcatttcc atggaaacat ggcagctagg  
 1140  
 acacggggta tacaacagca gccaaattct tccccacctc ctttacttcg aaaaaaagtt  
 1200  
 tggaaacctg gtccctatac tctgcagtca gaagtgggac tgagccatac atgcccttga  
 1260  
 attcctccct gtctggccct ccctctccag caagcagggt tttctttaac ttggcagtgt  
 1320  
 gcagaggaga agtggttaaca cccccacccc attcccctgc atcggagctc agtattccta  
 1380  
 cagggttaaga ggtaggaatc ttgctgggac gaggggagcc agaagtggca ataaaagcgt  
 1440  
 gttgacctgg gcaaaaaaaaa aaaaaaaaaa aaagaaaaaa aaaaaaa  
 1487

&lt;210&gt; 2742

&lt;211&gt; 163

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2742

Lys Ala Arg Gly Lys Val Ser Glu Ile Ile Asn Asn Ala Ile Val His  
 1 5 10 15  
 Tyr Arg Asp Asp Leu Asp Leu Gln Asn Leu Ile Asp Phe Gly Gln Lys  
 20 25 30  
 Lys Phe Ser Cys Cys Gly Gly Ile Ser Tyr Lys Asp Trp Ser Gln Asn  
 35 40 45  
 Met Tyr Phe Asn Cys Ser Glu Asp Asn Pro Ser Arg Glu Arg Cys Ser  
 50 55 60  
 Val Pro Tyr Ser Cys Cys Leu Pro Thr Pro Asp Gln Ala Val Ile Asn  
 65 70 75 80  
 Thr Met Cys Gly Gln Gly Met Gln Ala Phe Asp Tyr Leu Glu Ala Ser  
 85 90 95  
 Lys Val Ile Tyr Thr Asn Gly Cys Ile Asp Lys Leu Val Asn Trp Ile  
 100 105 110  
 His Ser Asn Leu Phe Leu Leu Gly Gly Val Ala Leu Gly Leu Ala Ile  
 115 120 125  
 Pro Gln Leu Val Gly Ile Leu Leu Ser Gln Ile Leu Val Asn Gln Ile

130                      135                      140  
 Lys Asp Gln Ile Lys Leu Gln Leu Tyr Asn Gln Gln His Arg Ala Asp  
 145                      150                      155                      160  
 Pro Trp Tyr

<210> 2743  
 <211> 384  
 <212> DNA  
 <213> Homo sapiens

<400> 2743  
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 60  
 gactccgggtg tccagtctcc gcccgagacc tccagagact ggagtgtccc atctccgccc  
 120  
 acagcctccc aagactcagg tgtccagtct ccacctggag cctccagaga ctggagtgtc  
 180  
 ccatctccgc ccagagccta ccaagactga ggtgtccagt ctccacctgg agcctccga  
 240  
 gactggagtg gcccatctct acctggagcc tcctgggact ggagtgtctc atctctgccc  
 300  
 agagcctccc aagactcgcg tatctcatct ccacgggag cctcctgaga ctggagtgcc  
 360  
 tgatctctgc ctggagcctc ccaa  
 384

<210> 2744  
 <211> 69  
 <212> PRT  
 <213> Homo sapiens

<400> 2744  
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 Gly Ala Ser Gln Asp Ser Gly Val Gln Ser Pro Pro Gly Ala Ser Arg  
 20                      25                      30  
 Asp Trp Ser Val Pro Ser Pro Pro Thr Ala Ser Gln Asp Ser Gly Val  
 35                      40                      45  
 Gln Ser Pro Pro Gly Ala Ser Arg Asp Trp Ser Val Pro Ser Pro Pro  
 50                      55                      60  
 Arg Ala Tyr Gln Asp  
 65

<210> 2745  
 <211> 769  
 <212> DNA  
 <213> Homo sapiens

<400> 2745  
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 60  
 ctctaggctc ttctgagagg gacagagaaa gaatagaaat gtgccctaaa agcataaatg  
 120

agtatcacct gagaaaatta ggcattccccg tcttggaac acgtctctgt gagtttgc  
 180  
 ttcatttggc ttggagccct ggctcgatgc ctcattggatc tttctcccca aggagggacg  
 240  
 tcttgagggg tccgagcctc aggccaagga cccctgatgc agactctgga atccctggcc  
 300  
 caaaggcctg tctgggcccc tctggggctg aggacacaca gatacataat gacacctgca  
 360  
 gaaatgtatt ctctgaggac acttagaata tgaggaagag ggtgtggccc aaccctcact  
 420  
 tcacctgggg aggggcttct tccggacagt agacaccctg cccgtgcaga gagatgtcat  
 480  
 gggggcacct gctctccctg atagatgctg agagcatcca gaaacttcca gaccagccct  
 540  
 ctcaccacac ccagaagagg cctttcccat ctggagagaa gcttccagac cagcccttca  
 600  
 cacaccacag ccaggagggg cctttcccat ctgggagaga aacttccaga ccagccctc  
 660  
 ataccacagc caagaggggc ctttctcacc tggagagaaa cttccagacc agccctcac  
 720  
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 769

<210> 2746

<211> 98

<212> PRT

<213> Homo sapiens

<400> 2746

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | Trp | Gly | His | Leu | Leu | Ser | Leu | Ile | Asp | Ala | Glu | Ser | Ile | Gln |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Lys | Leu | Pro | Asp | Gln | Pro | Ser | His | His | Thr | Gln | Lys | Arg | Pro | Phe | Pro |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ser | Gly | Glu | Lys | Leu | Pro | Asp | Gln | Pro | Phe | Thr | His | His | Ser | Gln | Glu |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Gly | Pro | Phe | Pro | Pro | Gly | Arg | Glu | Thr | Ser | Arg | Pro | Ala | Pro | His | Thr |
|     |     |     | 50  |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Thr | Ala | Lys | Arg | Gly | Leu | Ser | His | Leu | Glu | Arg | Asn | Phe | Gln | Thr | Ser |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |     |
| Pro | Ser | His | His | Ser | Gln | Glu | Gly | Pro | Phe | Pro | Pro | Gly | Glu | Lys | Leu |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |

Pro Asp

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<211> 1100

<212> DNA

<213> Homo sapiens

<400> 2747

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&lt;210&gt; 2748

&lt;211&gt; 205

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2748

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Phe | Phe | Ser | Arg | Pro | Arg | Ala | Pro | Ala | Ser | Ala | Gln | Pro | Arg | Trp |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Glu | Pro | Arg | Pro | Ala | Pro | Arg | Thr | Ala | Pro | Arg | Lys | Pro | Glu | Ser | Pro |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     | 30  |     |     |     |
| Trp | Thr | Gly | Ala | Phe | Trp | Ile | Pro | Arg | Pro | Pro | Ala | Gly | Ser | Pro | Lys |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Gly | Cys | Phe | Ala | Cys | Val | Ser | Lys | Pro | Pro | Ala | Leu | Gln | Ala | Pro | Ala |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Ala | Pro | Ala | Pro | Glu | Pro | Ser | Ala | Ser | Pro | Pro | Met | Ala | Pro | Thr | Leu |
| 65  |     |     |     | 70  |     |     |     | 75  |     |     |     | 80  |     |     |     |
| Phe | Pro | Met | Glu | Ser | Lys | Ser | Ser | Lys | Thr | Asp | Ser | Val | Arg | Ala | Ala |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     | 95  |     |     |     |
| Gly | Ala | Pro | Pro | Ala | Cys | Lys | His | Leu | Ala | Glu | Lys | Lys | Thr | Met | Thr |



|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     | 100 |     | 105 |     | 110 |     |     |     |     |     |     |     |     |     |     |
| Asn | Pro | Thr | Thr | Val | Ile | Glu | Val | Tyr | Pro | Asp | Thr | Thr | Glu | Val | Asn |
|     | 115 |     | 120 |     | 125 |     |     |     |     |     |     |     |     |     |     |
| Asp | Tyr | Tyr | Leu | Trp | Ser | Ile | Phe | Asn | Phe | Val | Tyr | Leu | Asn | Phe | Cys |
|     | 130 |     | 135 |     | 140 |     |     |     |     |     |     |     |     |     |     |
| Cys | Leu | Gly | Phe | Ile | Ala | Leu | Ala | Tyr | Ser | Leu | Lys | Val | Arg | Asp | Lys |
| 145 |     |     | 150 |     | 155 |     |     |     |     |     |     |     |     | 160 |     |
| Lys | Leu | Leu | Asn | Asp | Leu | Asn | Gly | Ala | Val | Glu | Asp | Ala | Lys | Thr | Ala |
|     |     |     | 165 |     | 170 |     |     |     |     |     |     |     |     | 175 |     |
| Arg | Leu | Phe | Asn | Ile | Thr | Ser | Ser | Ala | Leu | Ala | Ala | Ser | Cys | Ile | Ile |
|     | 180 |     | 185 |     | 190 |     |     |     |     |     |     |     |     |     |     |
| Leu | Val | Phe | Ile | Phe | Leu | Arg | Tyr | Pro | Leu | Thr | Asp | Tyr |     |     |     |
|     | 195 |     | 200 |     | 205 |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 2749

&lt;211&gt; 2050

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2749

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<211> 332

<212> PRT

<213> Homo sapiens

<400> 2750

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| Met | Asn | Thr | Ser | Pro | Gly | Thr | Val | Gly | Ser | Asp | Pro | Val | Ile | Leu | Ala |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Thr | Ala | Gly | Tyr | Asp | His | Thr | Val | Arg | Phe | Trp | Gln | Ala | His | Ser | Gly |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     | 30  |     |     |     |
| Ile | Cys | Thr | Arg | Thr | Val | Gln | His | Gln | Asp | Ser | Gln | Val | Asn | Ala | Leu |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |
| Glu | Val | Thr | Pro | Asp | Arg | Ser | Met | Ile | Ala | Ala | Ala | Val | Gln | Pro | Val |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Ser | Leu | Gly | Tyr | Gln | His | Ile | Arg | Met | Tyr | Asp | Leu | Asn | Ser | Asn | Asn |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Pro | Asn | Pro | Ile | Ile | Ser | Tyr | Asp | Gly | Val | Asn | Lys | Asn | Ile | Ala | Ser |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Val | Gly | Phe | His | Glu | Asp | Gly | Arg | Trp | Met | Tyr | Thr | Gly | Gly | Glu | Asp |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Cys | Thr | Ala | Arg | Ile | Trp | Asp | Leu | Arg | Ser | Arg | Asn | Leu | Gln | Cys | Gln |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Arg | Ile | Phe | Gln | Val | Asn | Ala | Pro | Ile | Asn | Cys | Val | Cys | Leu | His | Pro |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Asn | Gln | Ala | Glu | Leu | Ile | Val | Gly | Asp | Gln | Ser | Gly | Ala | Ile | His | Ile |
| 145 |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |     |
| Trp | Asp | Leu | Lys | Thr | Asp | His | Asn | Glu | Gln | Leu | Ile | Pro | Glu | Pro | Glu |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     | 175 |     |     |     |
| Val | Ser | Ile | Thr | Ser | Ala | His | Ile | Asp | Pro | Asp | Ala | Ser | Tyr | Met | Ala |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     | 190 |     |     |     |
| Ala | Val | Asn | Ser | Thr | Gly | Asn | Cys | Tyr | Val | Trp | Asn | Leu | Thr | Gly | Gly |
|     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |     |
| Ile | Gly | Asp | Glu | Val | Thr | Gln | Leu | Ile | Pro | Lys | Thr | Lys | Ile | Pro | Ala |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| His | Thr | Arg | Tyr | Ala | Leu | Gln | Cys | Arg | Phe | Ser | Pro | Asp | Ser | Thr | Leu |
| 225 |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |     |
| Leu | Ala | Thr | Cys | Ser | Ala | Asp | Gln | Thr | Cys | Lys | Ile | Trp | Arg | Thr | Ser |
|     |     |     | 245 |     |     |     |     | 250 |     |     |     | 255 |     |     |     |
| Asn | Phe | Ser | Leu | Met | Thr | Glu | Leu | Ser | Ile | Lys | Ser | Gly | Asn | Pro | Gly |
|     |     | 260 |     |     |     |     |     | 265 |     |     |     | 270 |     |     |     |
| Glu | Ser | Ser | Arg | Gly | Trp | Met | Trp | Gly | Cys | Ala | Phe | Ser | Gly | Asp | Ser |
|     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |     |
| Gln | Tyr | Ile | Val | Thr | Ala | Ser | Ser | Asp | Asn | Leu | Ala | Arg | Leu | Trp | Cys |
|     | 290 |     |     |     |     | 295 |     |     |     |     | 300 |     |     |     |     |
| Val | Glu | Thr | Gly | Glu | Ile | Lys | Arg | Glu | Tyr | Gly | Gly | His | Gln | Lys | Ala |
| 305 |     |     |     | 310 |     |     |     |     | 315 |     |     |     |     | 320 |     |
| Val | Val | Cys | Leu | Ala | Phe | Asn | Asp | Ser | Val | Leu | Gly |     |     |     |     |
|     |     |     | 325 |     |     |     |     |     | 330 |     |     |     |     |     |     |

&lt;210&gt; 2751

&lt;211&gt; 1877

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2751

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&lt;211&gt; 87

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2752

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&lt;211&gt; 2561

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2753

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&lt;210&gt; 2754

&lt;211&gt; 731

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2754

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Cys His Thr Val Val Pro Glu Lys Asp Gly Asp Asn Ile Ile Tyr Gln
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Ser Lys Asp Ser Lys Tyr Met Glu Glu Thr Leu Cys His Leu Glu Tyr
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Asn Ile Gly Tyr Ser Cys Arg Leu Val Ser Gln Asn Met Ala Leu Ile
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His Cys Thr Asp Leu Gly Asn Leu Leu Gly Lys Glu Asn Asp Val Ala
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Leu Ile Ile Asp Gly His Thr Leu Lys Tyr Ala Leu Ser Phe Glu Val
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Arg Arg Ser Phe Leu Asp Leu Ala Leu Ser Cys Lys Ala Val Ile Cys
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Cys Arg Val Ser Pro Leu Gln Lys Ser Glu Ile Val Asp Val Val Lys
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Lys Arg Val Lys Ala Ile Thr Leu Ala Ile Gly Asp Gly Ala Asn Asp
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Val Gly Met Ile Gln Thr Ala His Val Gly Val Gly Ile Ser Gly Asn
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&lt;210&gt; 2755

&lt;211&gt; 4795

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2755

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120



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&lt;210&gt; 2756

&lt;211&gt; 550

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2756

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Thr Glu Ser Asp Ala Pro Asn His Tyr Gln Ala Val Cys Arg Ala Leu
20      25      30
Phe Ala Glu Thr Met Glu Leu His Thr Phe Leu Thr Lys Ile Lys Ser
35      40      45
Ala Lys Glu Asn Leu Lys Lys Ile Gln Glu Met Glu Lys Ser Asp Glu
50      55      60
Ser Ser Thr Asp Leu Glu Glu Leu Lys Asn Ala Asp Trp Ala Arg Phe
65      70      75      80
Trp Val Gln Val Met Arg Asp Leu Arg Asn Gly Val Lys Leu Lys Lys
85      90      95
Val Gln Glu Arg Gln Tyr Asn Pro Leu Pro Ile Glu Tyr Gln Leu Thr
100     105     110
Pro Tyr Glu Met Leu Met Asp Asp Ile Arg Cys Lys Arg Tyr Thr Leu
115     120     125
Arg Lys Val Met Val Asn Gly Asp Ile Pro Pro Arg Leu Lys Lys Ser
130     135     140
Ala His Glu Ile Ile Leu Asp Phe Ile Arg Ser Arg Pro Pro Leu Asn
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Pro Val Ser Ala Arg Lys Leu Lys Pro Thr Pro Pro Arg Pro Arg Ser
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Leu His Glu Arg Ile Leu Glu Glu Ile Lys Ala Glu Arg Lys Leu Arg
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Pro Val Ser Pro Glu Glu Ile Arg Arg Ser Arg Leu Asp Val Thr Thr
195     200     205
Pro Glu Ser Thr Lys Asn Leu Val Glu Ser Ser Met Val Asn Gly Gly
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Ser Ser Val Ser Pro Ser Phe Pro Glu Glu Pro Val Leu Glu Ala Val
275     280     285
Ser Thr Arg Lys Lys Pro Pro Lys Phe Leu Pro Ile Ser Ser Thr Pro
290     295     300
Gln Pro Glu Arg Arg Gln Pro Pro Gln Arg Arg His Ser Ile Glu Lys
305     310     315     320
Glu Thr Pro Thr Asn Val Arg Gln Phe Leu Pro Pro Ser Arg Gln Ser
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Ser Arg Ser Leu Glu Glu Phe Cys Tyr Pro Val Glu Cys Leu Ala Leu
340     345     350
Thr Val Glu Glu Val Met His Ile Arg Gln Val Leu Val Lys Ala Glu
355     360     365
Leu Glu Lys Tyr Gln Gln Tyr Lys Asp Ile Tyr Thr Ala Leu Lys Lys
370     375     380
Gly Lys Leu Cys Phe Cys Cys Arg Thr Arg Arg Phe Ser Phe Phe Thr
385     390     395     400
Trp Ser Tyr Thr Cys Gln Phe Cys Lys Arg Pro Val Cys Ser Gln Cys
405     410     415
Cys Lys Lys Met Arg Leu Pro Ser Lys Pro Tyr Ser Thr Leu Pro Ile

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Phe Ser Leu Gly Pro Ser Ala Leu Gln Arg Gly Glu Ser Ser Met Arg
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Ser Glu Lys Pro Ser Thr Ala His His Arg Pro Leu Arg Ser Ile Ala
          450          455          460
Arg Phe Ser Ser Lys Ser Lys Ser Met Asp Lys Ser Asp Glu Glu Leu
465          470          475          480
Gln Phe Pro Lys Glu Leu Met Glu Asp Trp Ser Thr Met Glu Val Cys
          485          490          495
Val Asp Cys Lys Lys Phe Ile Ser Glu Ile Ile Ser Ser Ser Arg Arg
          500          505          510
Ser Leu Val Leu Ala Asn Lys Arg Ala Arg Leu Lys Arg Lys Thr Gln
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Ser Phe Tyr Met Ser Ser Pro Gly Pro Ser Glu Tyr Cys Pro Ser Glu
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 <213> Homo sapiens

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<210> 2758  
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 <212> PRT  
 <213> Homo sapiens

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<400> 2758
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Gln Asp His Ser Ser Leu Asn Pro Gln Lys Trp His Cys Val Asp Cys
          20          25          30
Asn Thr Thr Glu Ser Ile Trp Ala Cys Leu Ser Cys Ser His Val Ala
          35          40          45
Cys Gly Arg Tyr Ile Glu Glu His Ala Leu Lys His Phe Gln Glu Ser

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1999

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 <213> Homo sapiens

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 <212> PRT  
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 Ser Ser Leu Ser Gln Ala Gly Asp Pro Ile Thr Glu Gly Asn Lys Glu  
 35 40 45  
 Pro Asp Lys Thr Trp Val Lys Lys Gly Glu Pro Leu Pro Val Lys Leu

50                      55                      60  
 Asn Ser Ser Thr Glu Ala Asn Val Ile Lys Glu Ala Leu Asp Ser Ser  
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 Leu Glu Ser Thr Leu Asp Asn Ser Cys Gln Gly Ala Gln Met Asp Asn  
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 Lys Ser Glu Val Gln Leu Trp Leu Leu Lys Arg Ile Gln Val Pro Ile  
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 Glu Asp Ile Leu Pro Ser Lys Glu Glu Lys Ser Lys Thr Pro Pro Met  
                     115                      120                      125  
 Phe Leu Cys Ile Lys Val Gly Lys Pro Met Arg Lys Ser Phe Ala Thr  
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 His Thr Ala Ala Met Val Gln Gln Tyr Gly Lys Arg Arg Lys Gln Pro  
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 Glu Tyr Trp Phe Ala Val Pro Arg Glu Arg Val Asp His Leu Tyr Thr  
                     165                      170                      175  
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                     180                      185                      190  
 Gln Gly Phe Val Val Val Glu Lys Glu Glu Leu Asn Met Ile Asp Asn  
                     195                      200                      205  
 Phe Phe Ser Glu Pro Thr Thr Lys Ser Trp Glu Ile Ile Thr Val Glu  
                     210                      215                      220  
 Glu Ala Lys Arg Arg Lys Ser Thr Cys Ser Tyr Tyr Glu Asp Glu Asp  
 225                      230                      235                      240  
 Glu Glu Val Leu Pro Val Leu Arg Pro Pro Arg Ala Phe Trp Glu Asn  
                     245                      250                      255  
 Lys Pro Leu Asn Arg Trp Ala Arg Pro Phe Pro Ala Arg Val Gln Gly  
                     260                      265                      270  
 Tyr Pro Trp Arg Leu Ala Tyr Ser Thr Leu Glu His Gly Thr Ser Leu  
                     275                      280                      285  
 Lys Thr Leu Tyr Arg Lys Ser Ala Ser Leu Asp Ser Pro Val Leu Leu  
                     290                      295                      300  
 Val Ile Lys  
 305

&lt;210&gt; 2763

&lt;211&gt; 2210

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2763

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 180

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540  
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2040

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 2210

<210> 2764

<211> 423

<212> PRT

<213> Homo sapiens

<400> 2764

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Pro | Pro | Gln | Ala | Leu | Phe | His | Asp | Asp | Asp | Glu | Met | Glu | Gly | Asp |
| 1   |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Gly | Val | Ile | Asp | Pro | Gly | Met | Glu | Tyr | Val | Pro | Pro | Pro | Ala | Gly | Ser |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |     |
| Val | Ala | Ser | Gly | Pro | Val | Val | Gly | Gly | Arg | Lys | Lys | Val | Arg | Gly | Pro |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Glu | Gln | Ile | Lys | Gln | Glu | Val | Glu | Ser | Glu | Glu | Glu | Lys | Pro | Asp | Arg |
|     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |
| Met | Asp | Ile | Asp | Ser | Glu | Asp | Thr | Asp | Ser | Asn | Thr | Ser | Leu | Gln | Thr |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |     |
| Arg | Ala | Arg | Glu | Lys | Arg | Lys | Pro | Gln | Leu | Glu | Lys | Asp | Thr | Lys | Pro |
|     |     |     | 85  |     |     |     | 90  |     |     |     |     |     | 95  |     |     |
| Lys | Glu | Pro | Arg | Tyr | Thr | Pro | Val | Ser | Ile | Tyr | Glu | Glu | Lys | Leu | Leu |
|     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |     |
| Leu | Lys | Arg | Leu | Glu | Ala | Cys | Pro | Gly | Ala | Val | Ala | Met | Thr | Pro | Glu |
|     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |     |
| Ala | Arg | Arg | Leu | Lys | Arg | Lys | Leu | Ile | Val | Arg | Gln | Ala | Lys | Arg | Asp |
|     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |     |
| Arg | Gly | Leu | Pro | Leu | Phe | Asp | Leu | Asp | Gln | Val | Val | Asn | Ala | Ala | Leu |
| 145 |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |     |
| Leu | Leu | Val | Asp | Gly | Ile | Tyr | Gly | Ala | Lys | Glu | Gly | Gly | Ile | Ser | Arg |
|     |     |     | 165 |     |     |     | 170 |     |     |     |     |     | 175 |     |     |
| Leu | Pro | Ala | Gly | Gln | Ala | Thr | Tyr | Arg | Thr | Thr | Cys | Gln | Asp | Phe | Arg |
|     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |     |
| Ile | Leu | Asp | Arg | Tyr | Gln | Thr | Ser | Leu | Pro | Ser | Arg | Lys | Gly | Phe | Arg |
|     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |     |
| His | Gln | Thr | Thr | Lys | Phe | Leu | Tyr | Arg | Leu | Val | Gly | Ser | Glu | Asp | Met |
|     | 210 |     |     |     | 215 |     |     |     |     |     | 220 |     |     |     |     |
| Ala | Val | Asp | Gln | Ser | Ile | Val | Ser | Pro | Tyr | Thr | Ser | Arg | Ile | Leu | Lys |
| 225 |     |     |     | 230 |     |     |     |     | 235 |     |     |     | 240 |     |     |
| Pro | Tyr | Ile | Arg | Arg | Asp | Tyr | Glu | Thr | Lys | Pro | Pro | Lys | Leu | Gln | Leu |
|     |     |     | 245 |     |     |     | 250 |     |     |     |     |     | 255 |     |     |
| Leu | Ser | Gln | Ile | Arg | Ser | His | Leu | His | Arg | Ser | Asp | Pro | His | Trp | Thr |
|     |     | 260 |     |     |     | 265 |     |     |     |     |     | 270 |     |     |     |
| Pro | Glu | Pro | Asp | Ala | Pro | Leu | Asp | Tyr | Cys | Tyr | Val | Arg | Pro | Asn | His |
|     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |     |
| Ile | Pro | Thr | Ile | Asn | Ser | Met | Cys | Gln | Glu | Phe | Phe | Trp | Pro | Gly | Ile |
|     | 290 |     |     |     | 295 |     |     |     | 300 |     |     |     |     |     |     |
| Asp | Leu | Ser | Glu | Cys | Leu | Gln | Tyr | Pro | Asp | Phe | Ser | Val | Val | Val | Leu |
| 305 |     |     |     | 310 |     |     |     |     | 315 |     |     |     | 320 |     |     |
| Tyr | Lys | Lys | Val | Ile | Ile | Ala | Phe | Gly | Phe | Met | Val | Pro | Asp | Val | Lys |

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          325          330          335
Tyr Asn Glu Ala Tyr Ile Ser Phe Leu Phe Val His Pro Glu Trp Arg
          340          345          350
Arg Ala Gly Ile Ala Thr Phe Met Ile Tyr His Leu Ile Gln Thr Cys
          355          360          365
Met Gly Lys Asp Val Thr Leu His Val Ser Ala Ser Asn Pro Ala Met
          370          375          380
Leu Leu Tyr Gln Lys Phe Gly Phe Lys Thr Glu Glu Tyr Val Leu Asp
          385          390          395          400
Phe Tyr Asp Lys Tyr Tyr Pro Leu Glu Ser Thr Glu Cys Lys His Ala
          405          410          415
Phe Phe Leu Arg Leu Arg Arg
          420

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<210> 2765  
 <211> 582  
 <212> DNA  
 <213> Homo sapiens

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<400> 2765
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120
agtggagggg caggatggca cggccacttg gggcttgggg gcgctccggc tgccgtaccg
180
tggctgcaag cctaaaccgg gcttggggccc atcctgagca gccaggggtt tgttcagctc
240
ccggcttctg gccactcggc atcgccagag tctccaggcc agcacagggc cagcgatggc
300
aagtccaaga agcaggcacc cgctgaccac cactgccccg atagttgcag agggcaggcc
360
aggggagcag ctgacctcca ggaaggcaga gaggttgtgc tgggagctgg ttgtgtccca
420
gcagagcaga ggcttctggc cagagcagtt gtctcgccgg atgtcgtgcc aggactccag
480
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582

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<210> 2766  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

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<400> 2766
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1      5      10      15
Thr Val Pro Trp Ser Pro Gly Thr Thr Ser Ala Glu Thr Thr Ala Leu
20     25     30
Ala Arg Ser Leu Cys Ser Ala Gly Thr Gln Pro Ala Pro Ser Thr Thr
35     40     45
Ser Leu Pro Ser Trp Arg Ser Ala Ala Pro Leu Ala Trp Pro Leu Gln

```

50                      55                      60  
 Leu Ser Gly Gln Trp Trp Ser Ala Gly Ala Cys Phe Leu Asp Leu Pro  
 65                      70                      75                      80  
 Ser Leu Ala Leu Cys Trp Pro Gly Asp Ser Gly Asp Ala Glu Trp Pro  
                     85                      90                      95  
 Glu Ala Gly Ser  
                     100

&lt;210&gt; 2767

&lt;211&gt; 1202

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2767

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 120  
 gactcagcct acgacagcaa cgacctgat gtggaatcca acagcagcag tggcatcagc  
 180  
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 240  
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 420  
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 660  
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 720  
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 780  
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 840  
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 900  
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 960  
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 1020  
 ctagtggcct cccagcaatt tcaatttcta gcttgacact aaaatggtta tttttcagta  
 1080  
 acggggggag aagtggggag gcagagtgtg aagggaata aaaccaatta gtaattttta  
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 1200

ag  
1202

<210> 2768  
<211> 282  
<212> PRT  
<213> Homo sapiens

<400> 2768  
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20 25 30  
Ser Leu Ala Gln Pro Asp Arg Arg Tyr Ser Glu Pro Ser Met Pro Ser  
35 40 45  
Ser Gln Glu Cys Leu Glu Ser Arg Val Thr Asn Gln Thr Leu Thr Lys  
50 55 60  
Ser Glu Gly Asp Phe Pro Val Pro Arg Val Gly Ser Arg Leu Glu Ser  
65 70 75 80  
Glu Glu Ala Glu Asp Pro Phe Pro Glu Glu Val Phe Pro Ala Val Gln  
85 90 95  
Gly Lys Thr Lys Arg Pro Val Asp Leu Lys Ile Lys Asn Leu Ala Pro  
100 105 110  
Gly Ser Val Leu Pro Arg Ala Leu Val Leu Lys Ala Phe Ser Ser Ser  
115 120 125  
Ser Leu Asp Ala Ser Ser Asp Ser Ser Pro Val Ala Ser Pro Ser Ser  
130 135 140  
Pro Lys Arg Asn Phe Phe Ser Arg His Gln Ser Phe Thr Thr Lys Thr  
145 150 155 160  
Glu Lys Gly Lys Pro Ser Arg Glu Ile Lys Lys His Ser Met Ser Phe  
165 170 175  
Thr Phe Ala Pro His Lys Lys Val Leu Thr Lys Asn Leu Ser Ala Gly  
180 185 190  
Ser Gly Lys Ser Gln Asp Phe Thr Arg Asp His Val Pro Arg Gly Val  
195 200 205  
Arg Lys Glu Ser Gln Leu Ala Gly Arg Ile Val Gln Glu Asn Gly Cys  
210 215 220  
Glu Thr His Asn Gln Thr Ala Arg Gly Phe Cys Leu Arg Pro His Ala  
225 230 235 240  
Leu Ser Val Asp Asp Val Phe Gln Gly Ala Asp Trp Glu Arg Pro Gly  
245 250 255  
Ser Pro Pro Ser Tyr Glu Glu Ala Met Gln Gly Pro Ala Ala Arg Leu  
260 265 270  
Val Ala Ser Gln Gln Phe Gln Phe Leu Ala  
275 280

<210> 2769  
<211> 1286  
<212> DNA  
<213> Homo sapiens

<400> 2769  
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 180  
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 240  
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 360  
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 420  
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 960  
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 1286

&lt;210&gt; 2770

&lt;211&gt; 228

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2770

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 20 25 30  
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<210> 2771
<211> 1668
<212> DNA
<213> Homo sapiens
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<400> 2771
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aacgtcgggg gtgagttcca caccaccacc ctgggtaccc tgaggaagtt tccgggctca
180
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240
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300
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360
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420
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480
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540
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600
gttgtaagt ttgggccttg gaaggcggtc ctagacaaca gcgacctcat gcactgcctg
660

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 900  
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 1020  
 ctcttgaagt ccaataacaa gaccaagtaa gaatgtttca acaatgcgtt ggcaagagat  
 1080  
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 1260  
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 1668

&lt;210&gt; 2772

&lt;211&gt; 258

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2772

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ile | Cys | Met | Trp | Gln | Gly | Cys | Ala | Val | Glu | Arg | Pro | Val | Gly | Arg |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Met | Thr | Ser | Gln | Thr | Pro | Leu | Pro | Gln | Ser | Pro | Arg | Pro | Arg | Arg | Pro |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Thr | Met | Ser | Thr | Val | Val | Glu | Leu | Asn | Val | Gly | Gly | Glu | Phe | His | Thr |
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| Thr | Thr | Leu | Gly | Thr | Leu | Arg | Lys | Phe | Pro | Gly | Ser | Lys | Leu | Ala | Glu |
|     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |
| Met | Phe | Ser | Ser | Leu | Ala | Lys | Ala | Ser | Thr | Asp | Ala | Glu | Gly | Arg | Phe |
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| Phe | Ile | Asp | Arg | Pro | Ser | Thr | Tyr | Phe | Arg | Pro | Ile | Leu | Asp | Tyr | Leu |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Arg | Thr | Gly | Gln | Val | Pro | Thr | Gln | His | Ile | Pro | Glu | Val | Tyr | Arg | Glu |



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|     | 100 |     | 105 |     | 110 |     |     |     |     |     |     |     |     |     |     |
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|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Val | Pro | Gly | Tyr | Ser | Glu | Asn | Leu | Glu | Leu | Met | Val | Arg | Leu | Ala | Arg |
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| Ala | Glu | Ala | Ile | Thr | Ala | Arg | Lys | Ser | Ser | Val | Leu | Val | Cys | Leu | Val |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     | 175 |     |     |
| Glu | Thr | Glu | Glu | Gln | Asp | Ala | Tyr | Tyr | Ser | Glu | Val | Leu | Cys | Phe | Leu |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     | 190 |     |     |     |
| Gln | Asp | Lys | Lys | Met | Phe | Lys | Ser | Val | Val | Lys | Phe | Gly | Pro | Trp | Lys |
|     | 195 |     |     |     |     |     | 200 |     |     |     | 205 |     |     |     |     |
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|     | 210 |     |     |     |     | 215 |     |     |     | 220 |     |     |     |     |     |
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| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     | 240 |     |
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|     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |     |
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| Val | Asp | Ser | Ile | Cys | Ser | Val | Lys | Met | Glu | Val | Ser | Lys | Cys | Ala | Arg |
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| Tyr | Gly | Ser | Phe | Pro | Ile | Phe | Ile | Ser | Ala | Leu | Leu | Phe | Gly | Asn | Phe |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |
| Trp | Thr | His | Pro | Ile | Thr | Asp | Gln | Leu | Arg | Ala | Met | Asn | Lys | Ala | Ala |
|     | 50  |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |     |
| His | Gln | Glu | Ser | Thr | Glu | His | Val | Leu | Ser | Gly | Gly | Val | Val | Val | Ser |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Ala | Ile | Phe | Phe | Ile | Leu | Ser | Ala | Asn | Ile | Leu | Ser | Ser | Pro | Ser | Lys |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Arg | Gly | Gln | Lys | Gly | Thr | Leu | Ile | Gly | Tyr | Ser | Pro | Glu | Gly | Thr | Pro |
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<400> 2780

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | His | Ser | Glu | Gln | Glu | Gly | Gln | His | Val | Gln | Arg | Pro | Cys | Gly | Gly |
| 1   |     |     | 5   |     |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Lys | Glu | Phe | Gly | Leu | Phe | Glu | Glu | Leu | Ser | Glu | Gly | Ser | Phe | Gly | Trp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Val | Thr | Gly | Ile | Arg | Arg | Met | Arg | Phe | Lys | Gly | Leu | Ala | Gly | Val | Asp |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ser | Ser | Leu | Glu | Val | Val | Ser | Leu | Leu | Pro | Pro | Arg | Ser | Phe | Ser | Leu |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Asn | Ser | Glu | Gly | Ala | Glu | Arg | Met | Ala | Thr | Thr | Gly | Thr | Pro | Thr | Ala |
| 65  |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     | 80  |     |
| Asp | Arg | Gly | Asp | Ala | Ala | Ala | Thr | Asp | Asp | Pro | Ala | Ala | Arg | Phe | Gln |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Val | Gln | Lys | His | Ser | Trp | Asp | Gly | Leu | Arg | Ser | Ile | Ile | His | Gly | Ser |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Arg | Lys | Tyr | Ser | Gly | Leu | Ile | Val | Asn | Lys | Ala | Pro | His | Asp | Phe | Gln |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Phe | Val | Gln | Lys | Thr | Asp | Glu | Ser | Gly | Pro | His | Ser | His | Arg | Leu | Tyr |
|     |     |     | 130 |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Tyr | Leu | Gly | Met | Pro | Tyr | Gly | Ser | Arg | Glu | Asn | Ser | Leu | Leu | Tyr | Ser |
| 145 |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     | 160 |     |
| Glu | Ile | Pro | Lys | Lys | Val | Arg | Lys | Glu | Ala | Leu | Leu | Leu | Leu | Ser | Trp |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     |     | 175 |     |
| Lys | Gln | Met | Leu | Asp | His | Phe | Gln | Ala | Thr | Pro | His | His | Gly | Val | Tyr |

**2025**



|   |     |     |
|---|-----|-----|
| 610   | 615 | 620 |
| Ser His Ser Cys Ser Met Ser Gln Asn Phe Asp Met Phe Val Ser His |     |     |
| 625   | 630 | 635 |
| Tyr Ser Ser Val Ser Thr Pro Pro Cys Val His Val Tyr Lys Leu Ser |     |     |
|   | 645 | 650 |
| Gly Pro Asp Asp Asp Pro Leu His Lys Gln Pro Arg Phe Trp Ala Ser |     | 655 |
|   | 660 | 665 |
| Met Met Glu Ala Ala Ser Cys Pro Pro Asp Tyr Val Pro Pro Glu Ile |     | 670 |
|   | 675 | 680 |
| Phe His Phe His Thr Arg Ser Asp Val Arg Leu Tyr Gly Met Ile Tyr |     | 685 |
|   | 690 | 695 |
| Lys Pro His Ala Leu Gln His Ile Thr Lys Lys Ser Thr Val Phe Glu |     | 700 |
| 705   | 710 | 715 |
|   |     | 720 |

&lt;210&gt; 2781

&lt;211&gt; 1268

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2781

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<210> 2782

<211> 314

<212> PRT

<213> Homo sapiens

<400> 2782

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Asp | Gly | Leu | Gln | Glu | Val | Gln | Arg | Gln | Ala | Gln | Glu | Gly | Lys | Asn |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ile | Gly | Thr | Thr | Lys | Lys | Gly | Ile | Gly | Pro | Thr | Tyr | Ser | Ser | Lys | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ala | Arg | Thr | Gly | Leu | Arg | Ile | Cys | Asp | Leu | Leu | Ser | Asp | Phe | Asp | Glu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Phe | Ser | Ser | Arg | Phe | Lys | Asn | Leu | Ala | His | Gln | His | Gln | Ser | Met | Phe |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Pro | Thr | Leu | Glu | Ile | Asp | Ile | Glu | Gly | Gln | Leu | Lys | Arg | Leu | Lys | Gly |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Phe | Ala | Glu | Arg | Ile | Arg | Pro | Met | Val | Arg | Asp | Gly | Val | Tyr | Phe | Met |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Tyr | Glu | Ala | Leu | His | Gly | Pro | Pro | Lys | Lys | Ile | Leu | Val | Glu | Gly | Ala |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Asn | Ala | Ala | Leu | Leu | Asp | Ile | Asp | Phe | Gly | Thr | Tyr | Pro | Phe | Val | Thr |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Ser | Ser | Asn | Cys | Thr | Val | Gly | Gly | Val | Cys | Thr | Gly | Leu | Gly | Ile | Pro |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Pro | Gln | Asn | Ile | Gly | Asp | Val | Tyr | Gly | Val | Val | Lys | Ala | Tyr | Thr | Thr |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Arg | Val | Gly | Ile | Gly | Ala | Phe | Pro | Thr | Glu | Gln | Ile | Asn | Glu | Ile | Gly |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Gly | Leu | Leu | Gln | Thr | Arg | Gly | His | Glu | Trp | Gly | Val | Thr | Thr | Gly | Arg |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Lys | Arg | Arg | Cys | Gly | Trp | Leu | Asp | Leu | Met | Ile | Leu | Arg | Tyr | Ala | His |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Met | Val | Asn | Gly | Phe | Thr | Ala | Leu | Ala | Leu | Thr | Lys | Leu | Asp | Ile | Leu |
|     |     | 210 |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Asp | Val | Leu | Gly | Glu | Val | Lys | Val | Gly | Val | Ser | Tyr | Lys | Leu | Asn | Gly |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     | 240 |     |
| Lys | Arg | Ile | Pro | Tyr | Phe | Pro | Ala | Asn | Gln | Glu | Met | Leu | Gln | Lys | Val |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Glu | Val | Glu | Tyr | Glu | Thr | Leu | Pro | Gly | Trp | Lys | Ala | Asp | Thr | Thr | Gly |
|     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |     |     |
| Ala | Arg | Arg | Trp | Glu | Asp | Leu | Pro | Pro | Gln | Ala | Gln | Asn | Tyr | Ile | Arg |
|     |     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |
| Phe | Val | Glu | Asn | His | Val | Gly | Val | Ala | Val | Lys | Trp | Val | Gly | Val | Gly |

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 305                      310

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 <212> DNA  
 <213> Homo sapiens

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<211> 361

<212> PRT

<213> Homo sapiens

<400> 2784

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Glu | Arg | Gln | Ile | Glu | Glu | Glu | Asn | Arg | Glu | Arg | Glu | Trp | Glu | Arg |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Glu | Val | Leu | Gly | Ile | Lys | Arg | Asp | Lys | Ser | Asp | Ser | Pro | Ala | Ile | Gln |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Leu | Arg | Leu | Lys | Glu | Pro | Met | Asp | Val | Asp | Val | Glu | Asp | Tyr | Tyr | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ala | Phe | Leu | Asp | Met | Val | Arg | Ser | Leu | Leu | Asp | Gly | Asn | Ile | Asp | Ser |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Ser | Gln | Tyr | Glu | Asp | Ser | Leu | Arg | Glu | Met | Phe | Thr | Ile | His | Ala | Tyr |
| 65  |     |     |     |     |     | 70  |     |     |     | 75  |     |     |     | 80  |     |
| Ile | Ala | Phe | Thr | Met | Asp | Lys | Leu | Ile | Gln | Ser | Ile | Val | Arg | Gln | Leu |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
|     |     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |  |  |  |  |
| Gln | His | Ile | Val | Ser | Asp | Glu | Ile | Cys | Val | Gln | Val | Thr | Asp | Leu | Tyr |  |  |  |  |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |  |  |  |  |
| Leu | Ala | Glu | Asn | Asn | Asn | Gly | Ala | Thr | Gly | Gly | Gln | Leu | Asn | Thr | Gln |  |  |  |  |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |  |  |  |  |
| Asn | Ser | Arg | Ser | Leu | Leu | Glu | Ser | Thr | Tyr | Gln | Arg | Lys | Ala | Glu | Gln |  |  |  |  |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |  |  |  |  |
| Leu | Met | Ser | Asp | Glu | Asn | Cys | Phe | Lys | Leu | Met | Phe | Ile | Gln | Ser | Gln |  |  |  |  |
| 145 |     |     |     |     | 150 |     |     |     | 155 |     |     |     | 160 |     |     |  |  |  |  |
| Gly | Gln | Val | Gln | Leu | Thr | Ile | Glu | Leu | Leu | Asp | Thr | Glu | Glu | Glu | Asn |  |  |  |  |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     | 175 |     |     |     |  |  |  |  |
| Ser | Asp | Asp | Pro | Val | Glu | Ala | Glu | Arg | Trp | Ser | Asp | Tyr | Val | Glu | Arg |  |  |  |  |
|     | 180 |     |     |     |     |     |     | 185 |     |     |     | 190 |     |     |     |  |  |  |  |
| Tyr | Met | Asn | Ser | Asp | Thr | Thr | Ser | Pro | Glu | Leu | Arg | Glu | His | Leu | Ala |  |  |  |  |
|     | 195 |     |     |     |     |     | 200 |     |     |     | 205 |     |     |     |     |  |  |  |  |
| Gln | Lys | Pro | Val | Phe | Leu | Pro | Arg | Asn | Leu | Arg | Arg | Ile | Arg | Lys | Cys |  |  |  |  |
|     | 210 |     |     |     |     | 215 |     |     |     | 220 |     |     |     |     |     |  |  |  |  |
| Gln | Arg | Gly | Arg | Glu | Gln | Gln | Glu | Lys | Glu | Gly | Lys | Glu | Gly | Asn | Ser |  |  |  |  |
| 225 |     |     |     |     | 230 |     |     |     | 235 |     |     |     |     | 240 |     |  |  |  |  |
| Lys | Lys | Thr | Met | Glu | Asn | Val | Asp | Ser | Leu | Asp | Lys | Leu | Glu | Cys | Arg |  |  |  |  |
|     |     |     | 245 |     |     |     |     | 250 |     |     |     | 255 |     |     |     |  |  |  |  |
| Phe | Lys | Leu | Asn | Ser | Tyr | Lys | Met | Val | Tyr | Val | Ile | Lys | Ser | Glu | Asp |  |  |  |  |
|     | 260 |     |     |     |     |     |     | 265 |     |     |     | 270 |     |     |     |  |  |  |  |
| Tyr | Met | Tyr | Arg | Arg | Thr | Ala | Leu | Leu | Arg | Ala | His | Gln | Ser | His | Glu |  |  |  |  |
|     | 275 |     |     |     |     |     | 280 |     |     |     | 285 |     |     |     |     |  |  |  |  |
| Arg | Val | Ser | Lys | Arg | Leu | His | Gln | Arg | Phe | Gln | Ala | Trp | Val | Asp | Lys |  |  |  |  |
|     | 290 |     |     |     |     | 295 |     |     |     | 300 |     |     |     |     |     |  |  |  |  |
| Trp | Thr | Lys | Glu | His | Val | Pro | Arg | Glu | Met | Ala | Ala | Glu | Thr | Ser | Lys |  |  |  |  |
| 305 |     |     |     | 310 |     |     |     |     | 315 |     |     |     |     | 320 |     |  |  |  |  |
| Trp | Leu | Met | Gly | Glu | Gly | Leu | Glu | Gly | Leu | Val | Pro | Cys | Thr | Thr | Thr |  |  |  |  |
|     |     |     | 325 |     |     |     |     | 330 |     |     |     | 335 |     |     |     |  |  |  |  |
| Cys | Asp | Thr | Glu | Thr | Leu | His | Phe | Val | Ser | Ile | Asn | Lys | Tyr | Arg | Val |  |  |  |  |
|     |     | 340 |     |     |     |     |     | 345 |     |     |     | 350 |     |     |     |  |  |  |  |
| Lys | Tyr | Gly | Thr | Val | Phe | Lys | Ala | Pro |     |     |     |     |     |     |     |  |  |  |  |
|     | 355 |     |     |     |     |     | 360 |     |     |     |     |     |     |     |     |  |  |  |  |

&lt;210&gt; 2785

&lt;211&gt; 492

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2785

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<210> 2786  
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<400> 2786  
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 35 40 45  
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 <213> Homo sapiens

<400> 2787  
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 acaatgcaca gacatggcag tatccttctg gtgggaggga gtcaccattt gctctgcct  
 180  
 gccctctgct ggggtgctctt acaggtgcta ctgcatccag cgcttgaaac aattctgtgg  
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<210> 2788  
 <211> 95  
 <212> PRT

<213> Homo sapiens

<400> 2788

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           20           25           30
Ala Gly His Ala Thr Met His Arg His Gly Ser Ile Leu Leu Val Gly
           35           40           45
Gly Ser His His Leu Leu Cys Pro Ala Leu Cys Trp Val Leu Leu Gln
           50           55           60
Val Leu Leu His Pro Ala Leu Glu Thr Ile Leu Trp Gly Ile Asp Ser
65           70           75           80
Glu Glu Ile Thr Asp Gly Arg Asp Phe Leu Pro Gln Leu Thr Gln
           85           90           95

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<210> 2789

<211> 492

<212> DNA

<213> Homo sapiens

<400> 2789

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gcgaggccag gctgtgcagt ggggccagca ccagctgcag cttctcctcc agcaggtcca
180
ccctggactg cagcctctgc acttcttctt tcattgcact gtccactcct gcgggcagag
240
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300
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360
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tcgttccgaa tt
492

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<210> 2790

<211> 141

<212> PRT

<213> Homo sapiens

<400> 2790

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           20           25           30
Ala Arg Pro Gly Cys Ala Val Gly Pro Ala Pro Ala Ala Ala Ser Pro
           35           40           45
Pro Ala Gly Pro Pro Trp Thr Ala Ala Ser Ala Leu Leu Pro Ser Leu

```

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 50  |     | 55  |     | 60  |     |     |     |     |     |     |     |     |     |     |     |
| His | Cys | Pro | Leu | Leu | Arg | Ala | Glu | Pro | Gly | Ala | Gly | Ser | Arg | Pro | Ala |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Gly | Ser | Pro | Pro | Thr | Pro | Pro | Gly | Leu | Pro | Pro | Val | Pro | Arg | Glu | Arg |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Gln | Ser | Gln | Lys | Thr | Gln | Ala | Gln | Ala | Ser | Ala | Thr | Pro | Ala | Ala | Cys |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Leu | Ala | Leu | Ala | Arg | Gly | Leu | Arg | Leu | Cys | Arg | Leu | Ser | Thr | Ser | Gly |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Arg | Val | Ala | Leu | Arg | Arg | Gly | Ser | Gly | Ser | Arg | Pro | Arg |     |     |     |
|     | 130 |     |     |     |     | 135 |     |     |     |     |     | 140 |     |     |     |

&lt;210&gt; 2791

&lt;211&gt; 1271

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2791

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gtaagattat atccaaatat ttactcctgg ttgctcctct tgggcaagct gtgaatatga
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300
gaagtgtgcc taaattagca ttaggggttg agggatccta aggatgacaa aaagggactc
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720
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780
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900
caaccactct ggtaatctag aattcagtgg cagaaaataa ataagaagat aacttccttc
960
agaaagccat gacattgaaa taatgtggtc ataactcttt cttcagtata ccaataaaat
1020
attaatagca tgcggaagaa agaatgggtt gcatccacat ggagagtgtg ccatttagag
1080

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 1140  
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 1200  
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 1260  
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<210> 2792

<211> 123

<212> PRT

<213> Homo sapiens

<400> 2792

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Ser | Leu | His | Pro | Val | Leu | Leu | Phe | Leu | Asp | Val | Asn | Tyr | Glu | Asp |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Phe | Thr | Phe | Thr | Ile | Pro | Asp | Val | Glu | Asp | Ser | Ser | Gln | Arg | Pro | Asp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gln | Gly | Pro | Gln | Arg | Pro | Pro | Pro | Glu | Gly | Leu | Leu | Pro | Arg | Pro | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Gly | Asp | Ser | Gly | Asn | Gln | Asp | Asp | Gly | Pro | Gln | Gln | Arg | Pro | Pro | Lys |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Pro | Gly | Gly | His | His | Arg | His | Pro | Pro | Pro | Pro | Pro | Phe | Gln | Asn | Gln |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Gln | Arg | Pro | Pro | Gln | Arg | Gly | His | Arg | Gln | Leu | Ser | Leu | Pro | Arg | Phe |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Pro | Ser | Val | Ser | Leu | Gln | Glu | Ala | Ser | Ser | Phe | Phe | Arg | Arg | Asp | Arg |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Pro | Ala | Arg | His | Pro | Gln | Glu | Gln | Pro | Leu | Trp |     |     |     |     |     |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     |     |     |     |     |

<210> 2793

<211> 847

<212> DNA

<213> Homo sapiens

<400> 2793

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 120  
 tgaggcggcg gcgtcactgc caggaaacaa cccaacagt cagcgcgccg gcggccgcgg  
 180  
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 300  
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 360  
 cagatcttaa gtagtgatat ttctcttttg tctgcccta ttgtaagtgc agatggaaca  
 420  
 caacaggtta ttctggtaca agttaaccca ggagaagcat ttacaataag aagagaagat  
 480

ggacagtttc agtgcattac aggtcctgct caggttccaa tgatgtcccc aaatgggttct  
 540  
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 600  
 cgaagagttg tcgtgggtccc tcaggcacca gagtttcacc ctggtagtca cacagttctc  
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 720  
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 847

<210> 2794  
 <211> 139  
 <212> PRT  
 <213> Homo sapiens

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 Gln Val Ile Leu Val Gln Val Asn Pro Gly Glu Ala Phe Thr Ile Arg  
 35 40 45  
 Arg Glu Asp Gly Gln Phe Gln Cys Ile Thr Gly Pro Ala Gln Val Pro  
 50 55 60  
 Met Met Ser Pro Asn Gly Ser Val Pro Pro Ile Tyr Val Pro Pro Gly  
 65 70 75 80  
 Tyr Ala Pro Gln Val Ile Glu Asp Asn Gly Val Arg Arg Val Val Val  
 85 90 95  
 Val Pro Gln Ala Pro Glu Phe His Pro Gly Ser His Thr Val Leu His  
 100 105 110  
 Arg Ser Pro His Pro Pro Leu Pro Gly Phe Ile Pro Val Pro Thr Met  
 115 120 125  
 Met Pro Pro His His Val Ile Cys Thr His Pro  
 130 135

<210> 2795  
 <211> 1022  
 <212> DNA  
 <213> Homo sapiens

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 120  
 gcctggcagc tgctgggtgt ggaatagttc tggatgccaa tctctccag gctcctgcgg  
 180  
 atgtcaccca gcatggaaag gacatcttga gtgggcacca cccctgctc gccaccagt  
 240

gtcattgagaa ggtgctgctc cttctcgctg ggcttgctca gagagatgtg ccaggcccca  
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 360  
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 420  
 ttcccagcca gattgctcca gtccttgtag atcacctgag tagaatccca gggatcctg  
 480  
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 aatgaaggca aggcgggcac ctctctgtgc tggccagaca aaccagctgc tctgtagtg  
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 1020  
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 1022

<210> 2796  
 <211> 56  
 <212> PRT  
 <213> Homo sapiens

<400> 2796  
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 Gly Glu Glu Ala Glu Val Leu Glu Pro Arg Gly Ser Ser Ser Gly Cys  
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 Ser Ala Pro Leu Gly Ala Val Val  
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<210> 2797  
 <211> 475  
 <212> DNA  
 <213> Homo sapiens

<400> 2797  
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 120

ctgaactcca tcagcgagtc cccgcatgag cgcatgcacc cctacatcga gctggcctgg  
 180  
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 300  
 cacacgggct ggcaggccgc cctggtgtcc accatcatca tggtgcccg gggcctcatc  
 360  
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 420  
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<210> 2798

<211> 158

<212> PRT

<213> Homo sapiens

<400> 2798

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Pro | Leu | Leu | Ile | Ala | Phe | Ser | Ala | Cys | Thr | Thr | Val | Leu | Val | Ala |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Val | His | Leu | Phe | Ala | Leu | Leu | Ile | Ser | Thr | Cys | Ile | Leu | Pro | Asn | Val |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Glu | Ala | Val | Ser | Asn | Ile | His | Asn | Leu | Asn | Ser | Ile | Ser | Glu | Ser | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| His | Glu | Arg | Met | His | Pro | Tyr | Ile | Glu | Leu | Ala | Trp | Gly | Phe | Ser | Thr |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Val | Leu | Gly | Ile | Leu | Leu | Phe | Leu | Ala | Glu | Val | Val | Leu | Leu | Cys | Trp |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Ile | Lys | Phe | Leu | Pro | Val | Asp | Ala | Arg | Arg | Gln | Pro | Gly | Pro | Pro | Pro |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Gly | Pro | Gly | Ser | His | Thr | Gly | Trp | Gln | Ala | Ala | Leu | Val | Ser | Thr | Ile |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Ile | Met | Val | Pro | Val | Gly | Leu | Ile | Phe | Val | Val | Phe | Thr | Ile | His | Phe |
|     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |     |
| Tyr | Arg | Ser | Leu | Val | Arg | His | Lys | Thr | Glu | Arg | His | Asn | Arg | Glu | Ile |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Glu | Glu | Leu | His | Lys | Leu | Lys | Val | Gln | Leu | Asp | Gly | His | Glu |     |     |
| 145 |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     |     |     |

<210> 2799

<211> 2872

<212> DNA

<213> Homo sapiens

<400> 2799

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 120  
 gggcagccct tgagcttgac tcctctgggg ccagtctcta tcagaaaatg cctgaccagc  
 180  
 tcatgggtca tgtctccttt tttattctgc tgcattgatg ttggaggtgg cgaagacacc  
 240

ttcatggcca gcccgtaaa gctgagatc tccagggagc aggccatcgc gtcctcaag  
300  
gaccaggagc cgggggcctt catcatccgc gacagtcact ccttccgagg cgcgtacggg  
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540  
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720  
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780  
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840  
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 1980  
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 2580  
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 2640  
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 2700  
 acatgagaca tactgacaga atctgtgaagc taataaaatg taagaaaagg ttaaaaaaag  
 2760  
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 2820  
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 2872

&lt;210&gt; 2800

&lt;211&gt; 294

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2800

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | Pro | Phe | Leu | Phe | Cys | Cys | Met | Met | Val | Gly | Gly | Gly | Glu | Asp |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Thr | Phe | Met | Ala | Ser | Pro | Tyr | Lys | Pro | Glu | Ile | Ser | Arg | Glu | Gln | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ile | Ala | Leu | Leu | Lys | Asp | Gln | Glu | Pro | Gly | Ala | Phe | Ile | Ile | Arg | Asp |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ser | His | Ser | Phe | Arg | Gly | Ala | Tyr | Gly | Leu | Ala | Met | Lys | Val | Ser | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Pro | Pro | Pro | Thr | Ile | Met | Gln | Gln | Asn | Lys | Lys | Gly | Asp | Met | Thr | His |
| 65  |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     | 80  |     |
| Glu | Leu | Val | Arg | His | Phe | Leu | Ile | Glu | Thr | Gly | Pro | Arg | Gly | Val | Lys |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Leu | Lys | Gly | Cys | Pro | Asn | Glu | Pro | Asn | Phe | Gly | Ser | Leu | Ser | Ala | Leu |

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      100      105      110
Val Tyr Gln His Ser Ile Ile Pro Leu Ala Leu Pro Cys Lys Leu Val
      115      120      125
Ile Pro Asn Arg Asp Pro Thr Asp Glu Ser Lys Asp Ser Ser Gly Pro
      130      135      140
Ala Asn Ser Thr Ala Asp Leu Leu Lys Gln Gly Ala Ala Cys Asn Val
      145      150      155      160
Leu Phe Ile Asn Ser Val Asp Met Glu Ser Leu Thr Gly Pro Gln Ala
      165      170      175
Ile Ser Lys Ala Thr Ser Glu Thr Leu Ala Ala Asp Pro Thr Pro Ala
      180      185      190
Ala Thr Ile Val His Phe Lys Val Ser Ala Gln Gly Ile Thr Leu Thr
      195      200      205
Asp Asn Gln Arg Lys Leu Phe Phe Arg Arg His Tyr Pro Leu Asn Thr
      210      215      220
Val Thr Phe Cys Asp Leu Asp Pro Gln Glu Arg Lys Trp Met Lys Thr
      225      230      235      240
Glu Gly Gly Ala Pro Ala Lys Leu Phe Gly Phe Val Ala Arg Lys Gln
      245      250      255
Gly Ser Thr Thr Asp Asn Ala Cys His Leu Phe Ala Glu Leu Asp Pro
      260      265      270
Asn Gln Pro Ala Ser Ala Ile Val Asn Phe Val Ser Lys Val Met Leu
      275      280      285
Asn Ala Gly Gln Lys Arg
      290

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&lt;210&gt; 2801

&lt;211&gt; 549

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2801

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420
cctccccacca ttgtacagga caaagtgtt gctctgatcc aggcattggc tgatgccttt
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540
gttgaattc
549

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&lt;210&gt; 2802

<211> 151  
 <212> PRT  
 <213> Homo sapiens

<400> 2802  
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 Leu Glu Lys Ala Thr Asp Gly Ser Leu Gln Ser Glu Asp Trp Thr Leu  
 20 25 30  
 Asn Met Glu Ile Cys Asp Ile Ile Asn Glu Thr Glu Glu Gly Pro Lys  
 35 40 45  
 Asp Ala Ile Arg Ala Leu Lys Lys Arg Leu Asn Gly Asn Arg Asn Tyr  
 50 55 60  
 Arg Glu Val Met Leu Ala Leu Thr Val Leu Glu Thr Cys Val Lys Asn  
 65 70 75 80  
 Cys Gly His Arg Phe His Ile Leu Val Ala Asn Arg Asp Phe Ile Asp  
 85 90 95  
 Ser Val Leu Val Lys Ile Ile Ser Pro Lys Asn Asn Pro Pro Thr Ile  
 100 105 110  
 Val Gln Asp Lys Val Leu Ala Leu Ile Gln Ala Trp Ala Asp Ala Phe  
 115 120 125  
 Arg Ser Ser Pro Asp Leu Thr Gly Val Val His Ile Tyr Glu Glu Leu  
 130 135 140  
 Lys Arg Lys Gly Val Glu Phe  
 145 150

<210> 2803  
 <211> 459  
 <212> DNA  
 <213> Homo sapiens

<400> 2803  
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 120  
 ccgccagccg tagggtgtgt gctgtccggg ctcaaggga cctgtctcc gagtcgttcg  
 180  
 tgcagcgtgt gtaccagccc ttcctacca cctgcgacgg gcaccgggccc tgcagcacct  
 240  
 accgcaatat gccagccgcc atgccggaac ggaggagct gtgtccagcc tggccgctgc  
 300  
 cgctgccctg caggatggcg gggtagact tgccagtcag atgtggacna gtgcaatgaa  
 360  
 ggaagaagtg cagaggctgc agtccagggt ggacctgctg gaggagaagc tgcagctggt  
 420  
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 459

<210> 2804  
 <211> 153  
 <212> PRT  
 <213> Homo sapiens



&lt;400&gt; 2804

Xaa Met Ala Thr Pro Gly Leu Gln Gln His Gln Gln Pro Pro Gly Pro  
 1 5 10 15  
 Gly Arg His Arg Trp Pro Pro Pro Gly Gly Ala Ala Pro Ala Pro  
 20 25 30  
 Val Arg Gly Met Thr Asp Ser Pro Pro Ala Val Gly Cys Val Leu  
 35 40 45  
 Ser Gly Leu Thr Gly Thr Leu Ser Pro Ser Arg Ser Cys Ser Val Cys  
 50 55 60  
 Thr Ser Pro Ser Ser Pro Pro Ala Thr Gly Thr Gly Pro Ala Ala Pro  
 65 70 75 80  
 Thr Ala Ile Cys Gln Pro Pro Cys Arg Asn Gly Gly Ser Cys Val Gln  
 85 90 95  
 Pro Gly Arg Cys Arg Cys Pro Ala Gly Trp Arg Gly Asp Thr Cys Gln  
 100 105 110  
 Ser Asp Val Asp Xaa Cys Asn Glu Gly Arg Ser Ala Glu Ala Ala Val  
 115 120 125  
 Gln Gly Gly Pro Ala Gly Gly Glu Ala Ala Ala Gly Thr Gly Pro Thr  
 130 135 140  
 Ala Gln Pro Gly Leu Ala Gly Thr Gly  
 145 150

&lt;210&gt; 2805

&lt;211&gt; 771

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2805

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 aagtttaatc agacctgctc acacttcaga atagagaaga ttgagaggat ccagaatcca  
 120  
 gatctctgga atagctacca ggcaaagaaa aaaactatgg atgccaagaa tggccagaca  
 180  
 atgaatgaga agcaactctt ccatgggaca gatgccggct ccgtgccaca cgtcaatcga  
 240  
 aatggcttta accgcagcta tgccggaaag aatgctgtgg catatggaaa gggaacctat  
 300  
 tttgctgtca atgccaatta ttctgccaat gatacgtact ccagaccaga tgcaaattggg  
 360  
 agaaagcatg tgtattatgt gcgagtactt actggaatct atacacatgg aaatcattca  
 420  
 ttaattgtgc ctccttcaaa gaacctcaa aatcctactg acctgtatga cactgtcaca  
 480  
 gataatgtgc accatccaag tttatttgtg gcattttatg actaccaagc ataccagag  
 540  
 taccttatta cgtttagaaa ataacacttt ggtatccttc ccacaaaatt attctccatt  
 600  
 tgtacatata tagttgtaaa acaagtttta gctttttttt ttaattcctc ttaacagatt  
 660  
 tttctaatat ccaaggatca ttctttgtcg ctgcagtcag atctttcttc agcttctctt  
 720  
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 771

<210> 2806  
 <211> 187  
 <212> PRT  
 <213> Homo sapiens

<400> 2806  
 Xaa Asn Phe Cys Val Val Glu Leu Leu Pro Ser Asp Pro Glu Tyr Asn  
 1 5 10 15  
 Thr Val Ala Ser Lys Phe Asn Gln Thr Cys Ser His Phe Arg Ile Glu  
 20 25 30  
 Lys Ile Glu Arg Ile Gln Asn Pro Asp Leu Trp Asn Ser Tyr Gln Ala  
 35 40 45  
 Lys Lys Lys Thr Met Asp Ala Lys Asn Gly Gln Thr Met Asn Glu Lys  
 50 55 60  
 Gln Leu Phe His Gly Thr Asp Ala Gly Ser Val Pro His Val Asn Arg  
 65 70 75 80  
 Asn Gly Phe Asn Arg Ser Tyr Ala Gly Lys Asn Ala Val Ala Tyr Gly  
 85 90 95  
 Lys Gly Thr Tyr Phe Ala Val Asn Ala Asn Tyr Ser Ala Asn Asp Thr  
 100 105 110  
 Tyr Ser Arg Pro Asp Ala Asn Gly Arg Lys His Val Tyr Tyr Val Arg  
 115 120 125  
 Val Leu Thr Gly Ile Tyr Thr His Gly Asn His Ser Leu Ile Val Pro  
 130 135 140  
 Pro Ser Lys Asn Pro Gln Asn Pro Thr Asp Leu Tyr Asp Thr Val Thr  
 145 150 155 160  
 Asp Asn Val His His Pro Ser Leu Phe Val Ala Phe Tyr Asp Tyr Gln  
 165 170 175  
 Ala Tyr Pro Glu Tyr Leu Ile Thr Phe Arg Lys  
 180 185

<210> 2807  
 <211> 1660  
 <212> DNA  
 <213> Homo sapiens

<400> 2807  
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 caccatcacc ccacagcgag caagtctttt gttccctcag ctccctgcgac aaagtcagaa  
 120  
 ccaggtgct cagggccgcc tgtgaatgca ggtgccttgt cccaaacaga ggacatatta  
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 atagggccat gatttcctgt tgccacaatt ttgccaaggc aggctggcac cagaacacca  
 240  
 aagaagggaa attatagtgg agtagcagtt tgtgaatctg gagtcccttg ttcaatcaca  
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 480

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 aagtgtccag aggaacatgg tcatgggctc gtcaaccctg gctgaagact caagttgggc  
 660  
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 720  
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 780  
 cacggcttcg gcagtcccat cctccaccag gagcctgatg atggcctggc ttatagctgt  
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 ataagcacac acccagaaga gctgaaggct gaagacagag acgatatggc aagaggcagt  
 960  
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 1080  
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 1200  
 gtgagggggg aattcacatt cagcagtctc aagagcgact gttagcttca cacaccttct  
 1260  
 catggcccc gtgttcccc gtttcatcca gagagacgcc acaaggggtt cacatagtgt  
 1320  
 ccgtgacaaa atctcagcgg agaaagacac caaggaatct gtgaaattgt cactgagcag  
 1380  
 gtcggtcagt gaggattcag gcaatgactt gtttgcatcc agcacatctt ggatatcctg  
 1440  
 ggagctttca agctccagag tccagttgtc ctggacagtg aggcaggatg cacaaccagc  
 1500  
 caactccaga ggacgccgag atatgcagga tgaaccatcc ttttcaaaca acattggtgt  
 1560  
 agcggggcca ggagctacga gtcggtacac ctgtcccggg tgcaagaact caaaccagcg  
 1620  
 gactgaagag ccaaagaaaa tgaggtgaac cctctgatca  
 1660

&lt;210&gt; 2808

&lt;211&gt; 390

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2808

Met Leu Phe Glu Lys Asp Gly Ser Ser Cys Ile Ser Arg Arg Pro Leu  
 1 5 10 15  
 Glu Leu Ala Gly Cys Ala Ser Cys Leu Thr Val Gln Asp Asn Trp Thr  
 20 25 30  
 Leu Glu Leu Glu Ser Ser Gln Asp Ile Gln Asp Val Leu Asp Ala Asn  
 35 40 45  
 Lys Ser Leu Pro Glu Ser Ser Leu Thr Asp Leu Leu Ser Asp Asn Phe

|   |     |     |
|---|-----|-----|
| 50  | 55  | 60  |
| Thr Asp Ser Leu Val Ser Phe Ser Ala Glu Ile Leu Ser Arg Thr Leu |     |     |
| 65  | 70  | 75  |
| Cys Glu Pro Leu Val Ala Ser Leu Trp Met Lys Leu Gly Asn Thr Gly |     | 80  |
|   | 85  | 90  |
| Ala Met Arg Arg Cys Val Lys Leu Thr Val Ala Leu Glu Thr Ala Glu |     | 95  |
|   | 100 | 105 |
| Cys Glu Phe Pro Pro His Leu Asp Val Tyr Ile Glu Asp Pro His Leu |     | 110 |
|   | 115 | 120 |
| Pro Pro Ser Leu Gly Leu Leu Pro Gly Ala Arg Val His Phe Ser Gln |     | 125 |
|   | 130 | 135 |
| Leu Glu Lys Arg Val Ser Arg Ser His Asn Val Tyr Cys Cys Phe Arg |     | 140 |
| 145   | 150 | 155 |
| Ser Ser Thr Tyr Val Gln Val Leu Ser Phe Pro Pro Glu Thr Thr Ile |     | 160 |
|   | 165 | 170 |
| Ser Val Pro Leu Pro His Ile Tyr Leu Ala Glu Leu Leu Gln Gly Gly |     | 175 |
|   | 180 | 185 |
| Gln Ser Pro Phe Gln Ala Thr Ala Ser Cys His Ile Val Ser Val Phe |     | 190 |
|   | 195 | 200 |
| Ser Leu Gln Leu Phe Trp Val Cys Ala Tyr Cys Thr Ser Ile Cys Arg |     | 205 |
|   | 210 | 215 |
| Gln Gly Lys Cys Thr Arg Leu Gly Ser Thr Cys Pro Thr Gln Thr Ala |     | 220 |
| 225   | 230 | 235 |
| Ile Ser Gln Ala Ile Ile Arg Leu Leu Val Glu Asp Gly Thr Ala Glu |     | 240 |
|   | 245 | 250 |
| Ala Val Val Thr Cys Arg Asn His His Val Ala Ala Ala Leu Gly Leu |     | 255 |
|   | 260 | 265 |
| Cys Pro Arg Glu Trp Ala Ser Leu Leu Asp Phe Val Gln Val Pro Gly |     | 270 |
|   | 275 | 280 |
| Arg Val Val Leu Gln Phe Ala Gly Pro Gly Ala Gln Leu Glu Ser Ser |     | 285 |
|   | 290 | 295 |
| Ala Arg Val Asp Glu Pro Met Thr Met Phe Leu Trp Thr Leu Cys Thr |     | 300 |
| 305   | 310 | 315 |
| Ser Pro Ser Val Leu Arg Pro Ile Val Leu Ser Phe Glu Leu Glu Arg |     | 320 |
|   | 325 | 330 |
| Lys Pro Ser Lys Ile Val Pro Leu Glu Pro Pro Arg Leu Gln Arg Phe |     | 335 |
|   | 340 | 345 |
| Gln Cys Gly Glu Leu Pro Phe Leu Thr His Val Asn Pro Arg Leu Arg |     | 350 |
|   | 355 | 360 |
| Leu Ser Cys Leu Ser Ile Arg Glu Ser Glu Tyr Ser Ser Ser Leu Gly |     | 365 |
|   | 370 | 375 |
| Ile Leu Ala Ser Ser Cys   |     | 380 |
| 385   | 390 |     |

&lt;210&gt; 2809

&lt;211&gt; 1502

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2809

ncatttttttg gcatttgtgt ttagaaccag gaggaaggcg gaaggtaggg agggagggct

60

ggccccctc tgagggggct ctagtgcctg accctgatct gtcctcattc gacagctgaa

120

actgttaagc gctggcccag tccccccacc ccaccagcc gtgtactgcc tgggctcccc  
180  
tcaaagggaa attttttacgg aaacatcttg gcagcaagtg gaaaaagatc tatggcccat  
240  
gaaccaactg aaaactccaa gaacctcttg tctgcctctg ccagcagcga gtcctaagcg  
300  
cagaatccag agctcgtagc tgtcctcagc tgtaactact gtttcagaat gttgctgctg  
360  
catacatttg tcatgtcagc cagccagctc cgtgggtgag agtgtgctg tgcgctgtc  
420  
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480  
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720  
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900  
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1320  
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1380  
acaaacaaaa ggatgtgatc attaatgtg aagcgctttg taaaattcac atttacaaaa  
1440  
taataaagtc agttcaaacc taaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa  
1500  
aa  
1502

&lt;210&gt; 2810

&lt;211&gt; 102

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2810

Glu Cys Ala Cys Ala Arg Val Cys Val Cys Val Arg Leu Cys Val Arg  
 1 5 10 15  
 Val Cys Val Cys Ala Arg Leu Cys Val Cys Val Cys Ala Ser Val Cys  
 20 25 30  
 Ala Cys Val Cys Ala Cys Val Arg Leu Cys Val Arg Leu Cys Ala Cys  
 35 40 45  
 Val Cys Ala Ser Val Cys Met Cys Ala Arg Ala Xaa Val Cys Val Cys  
 50 55 60  
 Thr Cys Val Xaa Leu Cys Thr Arg Val Cys Val Cys Val His Ala Cys  
 65 70 75 80  
 Val Cys Val Cys Ala Arg Ala Cys Thr Ser Pro Pro Glu His Leu Gly  
 85 90 95  
 Phe Gly Thr Arg Trp Phe  
 100

&lt;210&gt; 2811

&lt;211&gt; 591

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2811

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 attaatgctg cccacccca gggttttaat cgggtctggg cagaagcggg cgataaaagc  
 120  
 caaaggagac cataaagtgt aggatatttc ctggttagt gctgccgggt aatcacgatg  
 180  
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 240  
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 300  
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 420  
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 480  
 ggaaggagtc ctcgggccgc agtggggcac caccgggccc ccggccctcc aggctgcgtg  
 540  
 gggccttctc tcagtgggca actggggagc tagcccgggg cggccgcaag c  
 591

&lt;210&gt; 2812

&lt;211&gt; 131

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2812

Met His Pro Ser Ser Ser Ala Ser Gln Pro Ser Val Ala Arg Arg Gln  
 1 5 10 15  
 Ser Pro Ser Leu Gly Gly Lys Ser Pro Glu Pro Ser Leu Pro Xaa Cys  
 20 25 30  
 Pro Ala Pro Ala Val Asp Glu Pro Gln Pro Xaa Ser Gln Ala Pro Pro

35 40 45  
 Gly Pro Arg Val Pro Gly Pro Pro Arg Pro Trp Gly Ala Ala Pro Leu  
 50 55 60  
 Arg Pro Arg Pro Gly Glu Gly Asp Pro Val Thr Arg Glu Arg Ser Pro  
 65 70 75 80  
 Val Pro Gly Ala Thr Glu Met Pro Pro Pro Arg Pro Lys Val Pro Ala  
 85 90 95  
 Pro Pro Gly Pro Thr Gly Arg Ser Pro Arg Ala Ala Val Gly His His  
 100 105 110  
 Arg Ala Ala Gly Pro Pro Gly Cys Val Gly Pro Ser Leu Ser Gly Gln  
 115 120 125  
 Leu Gly Ser  
 130

<210> 2813  
 <211> 2417  
 <212> DNA  
 <213> Homo sapiens

<400> 2813  
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 120  
 tgctgcagtt cagtgttgct ccagatttta tgcttggtct tagattttctc tgttctctaa  
 180  
 tttgttaagt ttgtctttaa tatttcacag gctttcttga tcatggatgg tgaagatata  
 240  
 ccagattttt caagtttaaa ggaggaaact gcttattgga aggaactttc cttgaagtat  
 300  
 aagcaaagct tccaggaagc tcgggatgag ctagttgaat tccaggaagg aagcagagaa  
 360  
 ttagaagcag agttggaggc acaattagta caggctgaac aaagaaatag agacttgcag  
 420  
 gctgataacc aaagactgaa atatgaagtg gaggcattaa aggagaagct agagcatcaa  
 480  
 tatgcacaga gctataagca ggtctcagtg ttagaagatg atttaagtca gactcggggc  
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 600  
 cgagccaaaa gggcaacaat agtttctactg gaaactttga acaaaactaaa ccaggccatt  
 660  
 gaacgaaatg catttttaga aagtgaactt gatgaaaagg aatctttgtt ggtctctgta  
 720  
 cagaggttaa aggatgaagc aagagattta aggcaagaac tagcagttcg ggaaagacaa  
 780  
 caggaagtaa ctagaaagtc ggctcctagc tctccaactc tagactgtga aaagatggac  
 840  
 tccgccgtcc aagcatcact ttctttgccg gctacccttg ttggcaaagg aacggagaac  
 900  
 acttttcctt caccgaaagc tataccaaat ggttttggtt ccagtccact aactcctct  
 960  
 gctaggatat cagcactaaa catcgtgggg gatctcttac ggaaagtagg ggcttttagaa  
 1020

tccaaattag cagcttgacg gaattttgca aaggaccaag catcacgaaa atcctatatt  
1080  
tcagggaatg ttaactgtgg ggtgctgaat ggcaatggca caaagttctc tcgatcaggg  
1140  
catacatctt tcttcgacaa aggggcagta aacggctttg accccgctcc tctcctcct  
1200  
ggtctgggct cctcgcgtcc atcgtcagcg ccgggtatgt gcctctcagt gtgtgagtgc  
1260  
ctagcctcca ggggggctcc tgccctcctc caacaaccca ggacacccac gcctcacccc  
1320  
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&lt;210&gt; 2814

&lt;211&gt; 471

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens



&lt;400&gt; 2814

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Phe Val Lys Phe Val Phe Asn Ile Ser Gln Ala Phe Leu Ile Met Asp
 1           5           10           15
Gly Glu Asp Ile Pro Asp Phe Ser Ser Leu Lys Glu Glu Thr Ala Tyr
 20           25           30
Trp Lys Glu Leu Ser Leu Lys Tyr Lys Gln Ser Phe Gln Glu Ala Arg
 35           40           45
Asp Glu Leu Val Glu Phe Gln Glu Gly Ser Arg Glu Leu Glu Ala Glu
 50           55           60
Leu Glu Ala Gln Leu Val Gln Ala Glu Gln Arg Asn Arg Asp Leu Gln
 65           70           75           80
Ala Asp Asn Gln Arg Leu Lys Tyr Glu Val Glu Ala Leu Lys Glu Lys
 85           90           95
Leu Glu His Gln Tyr Ala Gln Ser Tyr Lys Gln Val Ser Val Leu Glu
100           105           110
Asp Asp Leu Ser Gln Thr Arg Ala Ile Lys Glu Gln Leu His Lys Tyr
115           120           125
Val Arg Glu Leu Glu Gln Ala Asn Asp Asp Leu Glu Arg Ala Lys Arg
130           135           140
Ala Thr Ile Val Ser Leu Glu Thr Leu Asn Lys Leu Asn Gln Ala Ile
145           150           155           160
Glu Arg Asn Ala Phe Leu Glu Ser Glu Leu Asp Glu Lys Glu Ser Leu
165           170           175
Leu Val Ser Val Gln Arg Leu Lys Asp Glu Ala Arg Asp Leu Arg Gln
180           185           190
Glu Leu Ala Val Arg Glu Arg Gln Gln Glu Val Thr Arg Lys Ser Ala
195           200           205
Pro Ser Ser Pro Thr Leu Asp Cys Glu Lys Met Asp Ser Ala Val Gln
210           215           220
Ala Ser Leu Ser Leu Pro Ala Thr Pro Val Gly Lys Gly Thr Glu Asn
225           230           235           240
Thr Phe Pro Ser Pro Lys Ala Ile Pro Asn Gly Phe Gly Thr Ser Pro
245           250           255
Leu Thr Pro Ser Ala Arg Ile Ser Ala Leu Asn Ile Val Gly Asp Leu
260           265           270
Leu Arg Lys Val Gly Ala Leu Glu Ser Lys Leu Ala Ala Cys Arg Asn
275           280           285
Phe Ala Lys Asp Gln Ala Ser Arg Lys Ser Tyr Ile Ser Gly Asn Val
290           295           300
Asn Cys Gly Val Leu Asn Gly Asn Gly Thr Lys Phe Ser Arg Ser Gly
305           310           315           320
His Thr Ser Phe Phe Asp Lys Gly Ala Val Asn Gly Phe Asp Pro Ala
325           330           335
Pro Pro Pro Pro Gly Leu Gly Ser Ser Arg Pro Ser Ser Ala Pro Gly
340           345           350
Met Cys Leu Ser Val Cys Glu Cys Leu Ala Ser Arg Gly Ala Pro Ala
355           360           365
Leu Leu Gln Gln Pro Arg Thr Pro Thr Pro His Pro Ser Val Pro Gly
370           375           380
Pro Ser Pro Val Pro Leu Arg Leu Pro Pro His Gly Trp Gln Arg Ala
385           390           395           400
Gly Cys Met Gln Trp Arg Leu Leu Gly Pro Ala Gln Pro Arg Asn Ser
405           410           415
Ala Arg Tyr Gln Tyr Trp Leu Phe Ser Leu Leu Ala Val Val Pro Leu

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420 425 430  
 Val Ser His Asp Cys Thr Phe Val Gly Arg Lys Val Ile His Thr Cys  
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 Ile Thr Trp Ser Leu Asp Ala Glu Val Pro Ile His His Thr Cys Pro  
 450 455 460  
 Ile Ala Pro Thr Leu Leu Tyr  
 465 470

<210> 2815  
 <211> 1421  
 <212> DNA  
 <213> Homo sapiens

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 660  
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<210> 2816

<211> 307

<212> PRT

<213> Homo sapiens

<400> 2816

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Arg | Gly | Ser | Gln | Glu | Val | Leu | Leu | Met | Trp | Leu | Leu | Val | Leu | Ala |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Val | Gly | Gly | Thr | Glu | His | Ala | Tyr | Arg | Pro | Gly | Arg | Arg | Val | Cys | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Val | Arg | Ala | His | Gly | Asp | Pro | Val | Ser | Glu | Ser | Phe | Val | Gln | Arg | Val |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Tyr | Gln | Pro | Phe | Leu | Thr | Thr | Cys | Asp | Gly | His | Arg | Ala | Cys | Ser | Thr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Tyr | Arg | Thr | Ile | Tyr | Arg | Thr | Ala | Tyr | Arg | Arg | Ser | Pro | Gly | Leu | Ala |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Pro | Ala | Arg | Pro | Arg | Tyr | Ala | Cys | Cys | Pro | Gly | Trp | Lys | Arg | Thr | Ser |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Gly | Leu | Pro | Gly | Ala | Cys | Gly | Ala | Ala | Ile | Cys | Gln | Pro | Pro | Cys | Arg |
|     |     |     | 100 |     |     |     | 105 |     |     |     |     | 110 |     |     |     |
| Asn | Gly | Gly | Ser | Cys | Val | Gln | Pro | Gly | Arg | Cys | Arg | Cys | Pro | Ala | Gly |
|     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |     |
| Trp | Arg | Gly | Asp | Thr | Cys | Gln | Ser | Asp | Val | Asp | Glu | Cys | Ser | Ala | Arg |
|     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |     |
| Arg | Gly | Gly | Cys | Pro | Gln | Arg | Cys | Val | Asn | Thr | Ala | Gly | Ser | Tyr | Trp |
| 145 |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |     |
| Cys | Gln | Cys | Trp | Glu | Gly | His | Ser | Leu | Ser | Ala | Asp | Gly | Thr | Leu | Cys |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Val | Pro | Lys | Gly | Gly | Pro | Pro | Arg | Val | Ala | Pro | Asn | Pro | Thr | Gly | Val |
|     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |     |
| Asp | Ser | Ala | Met | Lys | Glu | Glu | Val | Gln | Arg | Leu | Gln | Ser | Arg | Val | Asp |
|     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |     |
| Leu | Leu | Glu | Glu | Lys | Leu | Gln | Leu | Val | Leu | Ala | Pro | Leu | His | Ser | Leu |
|     | 210 |     |     |     | 215 |     |     |     |     |     | 220 |     |     |     |     |
| Ala | Ser | Gln | Ala | Gly | Ala | Trp | Ala | Pro | Gly | Pro | Arg | Gln | Pro | Pro | Gly |
| 225 |     |     | 230 |     |     |     |     |     | 235 |     |     |     |     | 240 |     |
| Ala | Leu | Leu | Pro | Ala | Ala | Arg | Pro | His | Arg | Leu | Pro | Glu | Arg | Ala | Asp |
|     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |     |
| Phe | Leu | Pro | Gly | Gly | Ala | Ala | Gly | Val | Leu | Leu | Leu | Gln | Glu | Arg | Leu |
|     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |     |     |     |
| Xaa | Asp | Cys | Pro | Ala | Pro | Gln | Ala | Gly | Leu | Ser | Pro | Ser | Arg | Arg | Pro |
|     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |     |
| Ala | Ala | Pro | Met | Pro | Leu | Pro | Asn | Met | Leu | Gly | Val | Gln | Lys | Pro | Pro |
|     | 290 |     |     |     | 295 |     |     |     |     | 300 |     |     |     |     |     |
| Arg | Gly | Asp |     |     |     |     |     |     |     |     |     |     |     |     |     |

305

&lt;210&gt; 2817

&lt;211&gt; 219

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2817

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gttctgctgc gggcggagtt ccatacagcac cagcacacac accagcacac gcaccaacac
180
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219

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&lt;210&gt; 2818

&lt;211&gt; 73

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2818

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Xaa Gly Phe Ser Val Ser Leu Ser Phe Phe Leu Val Asp His Glu Leu
 1           5           10          15
Leu Arg Gln Glu Leu Asn Thr Arg Phe Leu Val Gln Ser Ala Glu Arg
          20          25          30
Pro Gly Ala Ser Leu Gly Pro Gly Val Leu Leu Arg Ala Glu Phe His
          35          40          45
Gln His Gln His Thr His Gln His Thr His Gln His Thr His Gln His
          50          55          60
Gln His Thr Phe Ala Pro Phe Thr Arg
65          70

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&lt;210&gt; 2819

&lt;211&gt; 730

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2819

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120
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420

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<210> 2820  
 <211> 195  
 <212> PRT  
 <213> Homo sapiens

<400> 2820  
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 35 40 45  
 Met Gly Ala Pro Gly Glu Arg Cys Lys Ser His Tyr Ala Ala Phe Ser  
 50 55 60  
 Val Gly Arg Glu Ala His Ala Gln Gln Pro Leu Leu Pro Asp Val Ile  
 65 70 75 80  
 Phe Asp Thr Glu Phe Val Asn Leu Tyr Asp His Phe Asn Met Phe Thr  
 85 90 95  
 Gly Lys Phe Tyr Cys Tyr Val Pro Gly Leu Tyr Phe Phe Ser Leu Asn  
 100 105 110  
 Val His Thr Trp Asn Gln Lys Glu Thr Tyr Leu His Ile Met Lys Asn  
 115 120 125  
 Glu Glu Glu Val Val Ile Leu Phe Ala Gln Val Gly Asp Arg Ser Ile  
 130 135 140  
 Met Gln Ser Gln Ser Leu Met Leu Glu Leu Arg Glu Gln Asp Gln Val  
 145 150 155 160  
 Trp Val Arg Leu Tyr Lys Gly Glu Arg Glu Asn Ala Ile Phe Ser Glu  
 165 170 175  
 Glu Leu Asp Thr Tyr Ile Thr Phe Ser Gly Tyr Leu Val Lys His Ala  
 180 185 190  
 Thr Glu Pro  
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<210> 2821  
 <211> 1746  
 <212> DNA  
 <213> Homo sapiens

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240  
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420  
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1740

cctagg

1746

<210> 2822

<211> 424

<212> PRT

<213> Homo sapiens

<400> 2822

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Gln | Leu | Gln | Thr | Arg | Phe | Tyr | Thr | Asp | Asn | Lys | Lys | Tyr | Ala |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Val | Asp | Asp | Val | Pro | Phe | Ser | Ile | Pro | Ala | Thr | Ser | Glu | Val | Ala | Asp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Leu | Ser | Asn | Ile | Ile | Asn | Lys | Leu | Leu | Glu | Thr | Lys | Asn | Glu | Leu | His |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Lys | His | Val | Glu | Phe | Asp | Phe | Leu | Ile | Lys | Gly | Gln | Phe | Leu | Arg | Met |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Pro | Leu | Asp | Lys | His | Met | Glu | Met | Glu | Asp | Ile | Ser | Ser | Glu | Glu | Val |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Val | Glu | Ile | Glu | Tyr | Val | Glu | Lys | Tyr | Thr | Ala | Pro | Gln | Pro | Glu | Gln |
|     |     |     |     | 85  |     |     |     |     |     | 90  |     |     |     | 95  |     |
| Cys | Met | Phe | His | Asp | Asp | Trp | Ile | Ser | Ser | Ile | Lys | Gly | Ala | Glu | Glu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Trp | Ile | Leu | Thr | Gly | Ser | Tyr | Gly | Lys | Thr | Ser | Arg | Ile | Trp | Ser | Leu |
|     | 115 |     |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Glu | Gly | Lys | Ser | Ile | Met | Thr | Ile | Val | Gly | His | Thr | Asp | Val | Val | Lys |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Asp | Val | Ala | Trp | Val | Lys | Lys | Asp | Ser | Leu | Ser | Cys | Leu | Leu | Xaa | Glu |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Cys | Phe | Tyr | Gly | Ser | Asp | Tyr | Ser | Leu | Met | Gly | Val | Glu | Cys | Arg | Glu |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Lys | Gln | Ser | Glu | Ser | Pro | Thr | Leu | Leu | Xaa | Arg | Gly | His | Ala | Gly | Ser |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Val | Asp | Ser | Ile | Ala | Val | Asp | Gly | Ser | Gly | Thr | Lys | Phe | Cys | Ser | Gly |
|     | 195 |     |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Ser | Trp | Asp | Lys | Met | Leu | Lys | Ile | Trp | Ser | Thr | Val | Pro | Thr | Asp | Glu |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Glu | Asp | Glu | Met | Glu | Glu | Ser | Thr | Asn | Arg | Pro | Arg | Lys | Lys | Gln | Lys |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |
| Thr | Glu | Gln | Leu | Gly | Leu | Thr | Arg | Thr | Pro | Ile | Val | Thr | Leu | Ser | Gly |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |
| His | Met | Glu | Ala | Val | Ser | Ser | Val | Leu | Trp | Ser | Asp | Ala | Glu | Glu | Ile |
|     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |     |     |
| Cys | Ser | Ala | Ser | Trp | Asp | His | Thr | Ile | Arg | Val | Trp | Asp | Val | Glu | Ser |
|     | 275 |     |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |
| Gly | Ser | Leu | Lys | Ser | Thr | Leu | Thr | Gly | Asn | Lys | Val | Phe | Asn | Cys | Ile |
|     | 290 |     |     |     |     | 295 |     |     |     |     | 300 |     |     |     |     |
| Ser | Tyr | Ser | Pro | Leu | Cys | Lys | Arg | Leu | Ala | Ser | Gly | Ser | Thr | Asp | Arg |
| 305 |     |     |     |     | 310 |     |     |     |     | 315 |     |     |     |     | 320 |
| His | Ile | Arg | Leu | Trp | Asp | Pro | Arg | Thr | Lys | Asp | Gly | Ser | Leu | Val | Ser |
|     |     |     |     | 325 |     |     |     |     | 330 |     |     |     |     | 335 |     |
| Leu | Ser | Leu | Thr | Ser | His | Thr | Gly | Trp | Val | Thr | Ser | Val | Lys | Trp | Ser |

340 345 350  
 Pro Thr His Glu Gln Gln Leu Ile Ser Gly Ser Leu Asp Asn Ile Val  
 355 360 365  
 Lys Leu Trp Asp Thr Arg Ser Cys Lys Ala Pro Leu Tyr Asp Leu Ala  
 370 375 380  
 Ala His Glu Asp Lys Val Leu Ser Val Asp Trp Thr Asp Thr Gly Leu  
 385 390 395 400  
 Leu Leu Ser Gly Gly Ala Asp Asn Lys Leu Tyr Ser Tyr Arg Tyr Ser  
 405 410 415  
 Pro Thr Thr Ser His Val Gly Ala  
 420

&lt;210&gt; 2823

&lt;211&gt; 461

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2823

cggccgcagc cttcccccttt actcctgggt gacaccatga actgctccca cgttcacccc  
 60  
 gttgtgtctg tcaagtggggg aagggggcgg aaccctcatg ctgggggttcg ggtggacgtg  
 120  
 ggtgggtggt gaccctgtt gggaggcaga cacagtcaca ggcgtcgccc ttgggaaggg  
 180  
 cagccggaga agctggccct gtgtgggcct gggcctgtag gggttcccag tggctttgcg  
 240  
 gagccagaga gctggatggc acctgggtcca gccaagcaaa gccccgaggg caggggctgg  
 300  
 atggggacac gcacatgtcc cttggccacg acaaaatggc agtgatgctg cttgccttcc  
 360  
 tgcagcatct gtgaggatca aatgcgtgca cctacgcaaa gcatccgcac atagcaagtg  
 420  
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 461

&lt;210&gt; 2824

&lt;211&gt; 81

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2824

Met Cys Val Ser Pro Ser Ser Pro Cys Pro Arg Gly Phe Ala Trp Leu  
 1 5 10 15  
 Asp Gln Val Pro Ser Ser Ser Leu Ala Pro Gln Ser His Trp Glu Thr  
 20 25 30  
 Leu Gln Ala Gln Ala His Thr Gly Pro Ala Ser Pro Ala Ala Leu Pro  
 35 40 45  
 Lys Gly Asp Ala Cys Asp Cys Val Cys Leu Pro Thr Gly Val Thr Thr  
 50 55 60  
 His Pro Arg Pro Pro Glu Pro Gln His Glu Gly Ser Ala Pro Phe Pro  
 65 70 75 80  
 His



&lt;210&gt; 2825

&lt;211&gt; 1520

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2825

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120  
gatggacatg tagaggtggc acgtttgctt ttggatagtg gtgctcaagt gaacatgcct  
180  
gcagattcat ttgaatctcc attgacgcta gctgcctgtg gaggacatgt tgaattggca  
240  
gctctactta ttgaaagggg agcaaactct gaagaagtta atgatgaagg atacactccc  
300  
ttgatggaag cagctcgaga aggacatgaa gaaatggtgg cattacttct tagcacaagg  
360  
agcnaaatat caatgcacag acagaagaaa ctcaagaaac tgctcttgac tctggcttgc  
420  
tgtggaggct ttctggaagt ggcagacttt ctaattaagg caggagccga tatagaacta  
480  
gggtgttcta cccctttaat ggaagctgct caagagggtc atttggagtt agttaataac  
540  
ttattagctg caggagctaa cgttcacgca acaacagcaa caggggatac agcactaaca  
600  
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660  
ttagacaagc aggaggacat gaagactatt ttggagggca tagatccggc caagcatctg  
720  
gaacatgaat ctgaagggtg aagaactcct ttaatgaaag ctgcaagagc tggatcatgt  
780  
tgtactgttc agttcttaat tagtaaagga gcgaatgtga atagaaccac agctaataat  
840  
gaccatactg tactgtccct ggcttgtgca gggggtcac tggcagtggt ggaactactt  
900  
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960  
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1020  
ctttcagccc ctccaccaga tgctactcag ttaactcccc catcccacga tttaaatagg  
1080  
gctcctcgtg taccagttca agcactgccc atggttgttc cacctcagga gcctgacaaa  
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1200  
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1260  
ccagagagca ttgtagaaga ggctcagga aagttaacag aactggaaca gaggataaaa  
1320  
gaagccatag aaaagaatgc acagctgcag tccttggaaac tggctcatgc tgaccaactt  
1380  
accaaggaga agatcgagga gctcaacaaa acaaggaggg aacaaattca gaagaaacaa  
1440

aagatttttg aggaactaca gaaagtagaa cgagagttac aactgaaaac tcagcagcag

1500

ctaaaaaagc agtatctaga

1520

<210> 2826

<211> 506

<212> PRT

<213> Homo sapiens

<400> 2826

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Leu | Thr | Leu | Ala | Cys | Tyr | Lys | Gly | His | Leu | Asp | Met | Val | Arg | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Leu | Leu | Glu | Ala | Gly | Ala | Asp | Gln | Glu | His | Lys | Thr | Asp | Glu | Met | His |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Thr | Ala | Leu | Met | Glu | Ala | Cys | Met | Asp | Gly | His | Val | Glu | Val | Ala | Arg |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Leu | Leu | Leu | Asp | Ser | Gly | Ala | Gln | Val | Asn | Met | Pro | Ala | Asp | Ser | Phe |
|     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |
| Glu | Ser | Pro | Leu | Thr | Leu | Ala | Ala | Cys | Gly | Gly | His | Val | Glu | Leu | Ala |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |
| Ala | Leu | Leu | Ile | Glu | Arg | Gly | Ala | Asn | Leu | Glu | Glu | Val | Asn | Asp | Glu |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Gly | Tyr | Thr | Pro | Leu | Met | Glu | Ala | Ala | Arg | Glu | Gly | His | Glu | Glu | Met |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Val | Ala | Leu | Leu | Leu | Ser | Thr | Arg | Ser | Xaa | Ile | Ser | Met | His | Arg | Gln |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Lys | Lys | Leu | Lys | Lys | Leu | Leu | Leu | Thr | Leu | Ala | Cys | Cys | Gly | Gly | Phe |
|     | 130 |     |     |     | 135 |     |     |     |     |     | 140 |     |     |     |     |
| Leu | Glu | Val | Ala | Asp | Phe | Leu | Ile | Lys | Ala | Gly | Ala | Asp | Ile | Glu | Leu |
| 145 |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |     |
| Gly | Cys | Ser | Thr | Pro | Leu | Met | Glu | Ala | Ala | Gln | Glu | Gly | His | Leu | Glu |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Leu | Val | Lys | Tyr | Leu | Leu | Ala | Ala | Gly | Ala | Asn | Val | His | Ala | Thr | Thr |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Ala | Thr | Gly | Asp | Thr | Ala | Leu | Thr | Tyr | Ala | Cys | Glu | Asn | Gly | His | Thr |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Asp | Val | Ala | Asp | Val | Leu | Leu | Gln | Ala | Gly | Ala | Asp | Leu | Asp | Lys | Gln |
|     | 210 |     |     |     | 215 |     |     |     |     |     | 220 |     |     |     |     |
| Glu | Asp | Met | Lys | Thr | Ile | Leu | Glu | Gly | Ile | Asp | Pro | Ala | Lys | His | Leu |
| 225 |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |     |
| Glu | His | Glu | Ser | Glu | Gly | Gly | Arg | Thr | Pro | Leu | Met | Lys | Ala | Ala | Arg |
|     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |     |
| Ala | Gly | His | Val | Cys | Thr | Val | Gln | Phe | Leu | Ile | Ser | Lys | Gly | Ala | Asn |
|     |     | 260 |     |     |     |     |     | 265 |     |     |     |     | 270 |     |     |
| Val | Asn | Arg | Thr | Thr | Ala | Asn | Asn | Asp | His | Thr | Val | Leu | Ser | Leu | Ala |
|     | 275 |     |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |
| Cys | Ala | Gly | Gly | His | Leu | Ala | Val | Val | Glu | Leu | Leu | Leu | Ala | His | Gly |
|     | 290 |     |     |     | 295 |     |     |     |     | 300 |     |     |     |     |     |
| Ala | Asp | Pro | Thr | His | Arg | Leu | Lys | Asp | Gly | Ser | Thr | Met | Leu | Ile | Glu |
| 305 |     |     |     | 310 |     |     |     |     | 315 |     |     |     |     | 320 |     |
| Ala | Ala | Lys | Gly | Gly | His | Thr | Ser | Val | Val | Cys | Tyr | Leu | Leu | Asp | Tyr |
|     |     |     | 325 |     |     |     |     | 330 |     |     |     |     | 335 |     |     |
| Pro | Asn | Asn | Leu | Leu | Ser | Ala | Pro | Pro | Pro | Asp | Val | Thr | Gln | Leu | Thr |

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          340          345          350
Pro Pro Ser His Asp Leu Asn Arg Ala Pro Arg Val Pro Val Gln Ala
          355          360          365
Leu Pro Met Val Val Pro Pro Gln Glu Pro Asp Lys Pro Pro Ala Asn
          370          375          380
Val Ala Thr Thr Leu Pro Ile Arg Asn Lys Ala Ala Ser Lys Gln Lys
385          390          395          400
Ser Ser Ser His Leu Pro Ala Asn Ser Gln Asp Val Gln Gly Tyr Ile
          405          410          415
Thr Asn Gln Ser Pro Glu Ser Ile Val Glu Glu Ala Gln Gly Lys Leu
          420          425          430
Thr Glu Leu Glu Gln Arg Ile Lys Glu Ala Ile Glu Lys Asn Ala Gln
          435          440          445
Leu Gln Ser Leu Glu Leu Ala His Ala Asp Gln Leu Thr Lys Glu Lys
          450          455          460
Ile Glu Glu Leu Asn Lys Thr Arg Glu Glu Gln Ile Gln Lys Lys Gln
465          470          475          480
Lys Ile Leu Glu Glu Leu Gln Lys Val Glu Arg Glu Leu Gln Leu Lys
          485          490          495
Thr Gln Gln Gln Leu Lys Lys Gln Tyr Leu
          500          505

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&lt;210&gt; 2827

&lt;211&gt; 481

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2827

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cgggaggcag ctgctgccgc aggagatgct tcagaggatt cggacgcagg gtccagggcg
60
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120
ctgtgcacc tgtgtgtcca gcagcctctt cagctgctgc aggtggaatt cttgcgtctg
180
aacactcacg aagaccctca actgctggag gccaccctgg ccagctgcc tcaaaacctg
240
tcctgcctcc gctccctggt cctcaaaaga gggcaacgcc gggacacact gggcgcctgt
300
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360
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480
c
481

```

&lt;210&gt; 2828

&lt;211&gt; 160

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2828

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Arg Glu Ala Ala Ala Ala Ala Gly Asp Ala Ser Glu Asp Ser Asp Ala

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|   |     |     |     |
|---|-----|-----|-----|
| 1   | 5   | 10  | 15  |
| Gly Ser Arg Ala Leu Pro Phe Leu Gly Gly Asn Arg Leu Ser Leu Asp |     |     |     |
|   | 20  | 25  | 30  |
| Leu Tyr Pro Gly Gly Cys Gln Gln Leu Leu His Leu Cys Val Gln Gln |     |     |     |
|   | 35  | 40  | 45  |
| Pro Leu Gln Leu Leu Gln Val Glu Phe Leu Arg Leu Asn Thr His Glu |     |     |     |
|   | 50  | 55  | 60  |
| Asp Pro Gln Leu Leu Glu Ala Thr Leu Ala Gln Leu Pro Gln Asn Leu |     |     |     |
| 65  | 70  | 75  | 80  |
| Ser Cys Leu Arg Ser Leu Val Leu Lys Arg Gly Gln Arg Arg Asp Thr |     |     |     |
|   | 85  | 90  | 95  |
| Leu Gly Ala Cys Leu Arg Gly Ala Leu Thr Asn Leu Pro Ala Gly Leu |     |     |     |
|   | 100 | 105 | 110 |
| Ser Gly Leu Ala His Leu Ala His Leu Asp Leu Ser Phe Asn Ser Leu |     |     |     |
|   | 115 | 120 | 125 |
| Glu Thr Leu Pro Ala Cys Val Leu Gln Met Arg Gly Leu Gly Ala Leu |     |     |     |
|   | 130 | 135 | 140 |
| Leu Leu Ser His Asn Cys Leu Ser Glu Leu Pro Glu Ala Leu Gly Ala |     |     |     |
| 145   | 150 | 155 | 160 |

&lt;210&gt; 2829

&lt;211&gt; 3648

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2829

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nnntttttttt tttttttttt aatgtagcaa ttatatattt cgtcaattag aggtttgctc
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tctaaaagca gatacttttc attttaaaagt acataggata attctcaaga agtatttgctc
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gcagtactgg tgggttatggc taaaaataga gcaatagtga aaataaaaaat aagtgcctac
180
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240
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300
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360
caacttacct agcaaatacca cctttttcgc ctttaagaat acgttttcat tgaattccta
420
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480
gtaagctcag atggaaagag acctttggga tttcatttta ttatgtttta tatatgtttt
540
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600
cgtgtgttca gtagtcaaag taattaaaat tagcacctat ataatgagct tgcattttt
660
aatgttcttt accaaccaga atcctaataga agtctaaaag gtttaggctg ggcacgttgg
720
ctcacgctg caatcccagc ccaagaagtt cttttggcca agacgcacac acacacacca
780ttctattttc ttccagtga acgacaacca caagctgtca gcacttcact      840
atttgctgtc ccctcagcgg gatcgggatg cagctacgca gcggggccct ggcgagccgc
900

```

ggtgtcaggg cccttttctc ctcttccac cgtgggaagc gaattcagtg gcgtaaggg  
960  
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1020  
ccttcgccc cctctgatct cgacttctcg caacctatcc aggtcctctc tgggcctctg  
1080  
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1140  
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1200  
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1500  
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2100  
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2160  
gaattttcag aagaggaacg agtaagagaa ctcaagcaag aaaagaaacg ccaaaaacgg  
2220  
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2280  
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2340  
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2520

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 3240  
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 3300  
 tctttcttgt tttgggagac ggtggaggta tcctcattag ttctttcttc aggcttgtgt  
 3360  
 ctttagttgc gtggctgcgc aggcctgcca tatgatttaa gccatctctt ttcattaaat  
 3420  
 gtttctcttc ctgtgagact tactaaagca acttagtggc aaaaagtaat gttgtactta  
 3480  
 taattctgta cagaaatgac aatgagctga atatattggt ttacaaagta gacatccact  
 3540  
 tgcaaaatgt ttggatgtaa tgttaaagcg caatgtgcaa aattttaa atagaatatt  
 3600  
 tattaatacg cacaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaa  
 3648

&lt;210&gt; 2830

&lt;211&gt; 668

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2830

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Val | Met | Glu | Phe | Pro | Asp | Asn | Val | Leu | Asn | Leu | Asp | Gly | His | Gln |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Asn | Asn | Gly | Ala | Gln | Leu | Lys | Gln | Phe | Ile | Gln | Arg | His | Gly | Met | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Lys | Gln | Gln | Asp | Leu | Ser | Ile | Ala | Met | Val | Val | Thr | Ser | Arg | Glu | Val |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Leu | Ser | Ala | Leu | Ser | Gln | Leu | Val | Pro | Cys | Val | Gly | Cys | Arg | Arg | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Val | Glu | Arg | Leu | Phe | Ser | Gln | Leu | Val | Glu | Ser | Gly | Asn | Pro | Ala | Leu |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Glu | Pro | Leu | Thr | Val | Gly | Pro | Lys | Gly | Val | Leu | Ser | Val | Thr | Arg | Ser |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Cys | Met | Thr | Asp | Ala | Lys | Lys | Leu | Tyr | Thr | Leu | Phe | Tyr | Val | His | Gly |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Ser | Lys | Leu | Asn | Asp | Met | Ile | Asp | Ala | Ile | Pro | Lys | Ser | Lys | Lys | Asn |
|     |     | 115 |     |     |     | 120 |     |     |     |     |     | 125 |     |     |     |
| Lys | Arg | Cys | Gln | Leu | His | Ser | Leu | Asp | Thr | His | Lys | Pro | Lys | Pro | Leu |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Gly | Gly | Cys | Trp | Met | Asp | Val | Trp | Glu | Leu | Met | Ser | Gln | Glu | Cys | Arg |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Asp | Glu | Val | Val | Leu | Ile | Asp | Ser | Ser | Cys | Leu | Leu | Glu | Thr | Leu | Glu |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Thr | Tyr | Leu | Arg | Lys | His | Arg | Phe | Cys | Thr | Asp | Cys | Lys | Asn | Lys | Val |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Leu | Arg | Ala | Tyr | Asn | Ile | Leu | Ile | Gly | Glu | Leu | Asp | Cys | Ser | Lys | Glu |
|     | 195 |     |     |     |     | 200 |     |     |     |     |     | 205 |     |     |     |
| Lys | Gly | Tyr | Cys | Ala | Ala | Leu | Tyr | Glu | Gly | Leu | Arg | Cys | Cys | Pro | His |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Glu | Arg | His | Ile | His | Val | Cys | Cys | Glu | Thr | Asp | Phe | Ile | Ala | His | Leu |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |
| Leu | Gly | Arg | Ala | Glu | Pro | Glu | Phe | Ala | Gly | Gly | Tyr | Glu | Arg | Arg | Glu |
|     |     |     | 245 |     |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Arg | His | Ala | Lys | Thr | Ile | Asp | Ile | Ala | Gln | Glu | Glu | Val | Leu | Thr | Cys |
|     |     | 260 |     |     |     |     |     | 265 |     |     |     |     | 270 |     |     |
| Leu | Gly | Ile | His | Leu | Tyr | Glu | Arg | Leu | His | Arg | Ile | Trp | Gln | Lys | Leu |
|     | 275 |     |     |     |     | 280 |     |     |     |     |     | 285 |     |     |     |
| Arg | Ala | Glu | Glu | Gln | Thr | Trp | Gln | Met | Leu | Phe | Tyr | Leu | Gly | Val | Asp |
|     | 290 |     |     |     |     | 295 |     |     |     |     | 300 |     |     |     |     |
| Ala | Leu | Arg | Lys | Ser | Phe | Glu | Met | Thr | Val | Glu | Lys | Val | Gln | Gly | Ile |
| 305 |     |     |     |     | 310 |     |     |     |     | 315 |     |     |     |     | 320 |
| Ser | Arg | Leu | Glu | Gln | Leu | Cys | Glu | Glu | Phe | Ser | Glu | Glu | Glu | Arg | Val |
|     |     |     | 325 |     |     |     |     |     | 330 |     |     |     |     | 335 |     |
| Arg | Glu | Leu | Lys | Gln | Glu | Lys | Lys | Arg | Gln | Lys | Arg | Lys | Asn | Arg | Arg |
|     |     | 340 |     |     |     |     |     | 345 |     |     |     |     | 350 |     |     |
| Lys | Asn | Lys | Cys | Val | Cys | Asp | Ile | Pro | Thr | Pro | Leu | Gln | Thr | Ala | Asp |
|     | 355 |     |     |     |     |     | 360 |     |     |     |     | 365 |     |     |     |
| Glu | Lys | Glu | Val | Ser | Gln | Glu | Lys | Glu | Thr | Asp | Phe | Ile | Glu | Asn | Ser |
|     | 370 |     |     |     |     | 375 |     |     |     |     | 380 |     |     |     |     |
| Ser | Cys | Lys | Ala | Cys | Gly | Ser | Thr | Glu | Asp | Gly | Asn | Thr | Cys | Val | Glu |
| 385 |     |     |     |     | 390 |     |     |     |     | 395 |     |     |     |     | 400 |
| Val | Ile | Val | Thr | Asn | Glu | Asn | Thr | Ser | Cys | Thr | Cys | Pro | Ser | Ser | Gly |
|     |     |     | 405 |     |     |     |     |     | 410 |     |     |     |     | 415 |     |
| Asn | Leu | Leu | Gly | Ser | Pro | Lys | Ile | Lys | Lys | Gly | Leu | Ser | Pro | His | Cys |
|     |     | 420 |     |     |     |     |     | 425 |     |     |     |     | 430 |     |     |
| Asn | Gly | Ser | Asp | Cys | Gly | Tyr | Ser | Ser | Ser | Met | Glu | Gly | Ser | Glu | Thr |
|     | 435 |     |     |     |     |     | 440 |     |     |     |     | 445 |     |     |     |
| Gly | Ser | Arg | Glu | Gly | Ser | Asp | Val | Ala | Cys | Thr | Glu | Gly | Ile | Cys | Asn |
|     | 450 |     |     |     |     | 455 |     |     |     |     | 460 |     |     |     |     |
| His | Asp | Glu | His | Gly | Asp | Asp | Ser | Cys | Val | His | His | Cys | Glu | Asp | Lys |
| 465 |     |     |     |     | 470 |     |     |     |     | 475 |     |     |     |     | 480 |
| Glu | Asp | Asp | Gly | Asp | Ser | Cys | Val | Glu | Cys | Trp | Ala | Asn | Ser | Glu | Glu |
|     |     |     |     | 485 |     |     |     |     | 490 |     |     |     |     | 495 |     |
| Asn | Asp | Thr | Lys | Gly | Lys | Asn | Lys | Lys | Lys | Lys | Lys | Lys | Ser | Lys | Ile |

|   |     |     |
|---|-----|-----|
| 500   | 505 | 510 |
| Leu Lys Cys Asp Glu His Ile Gln Lys Leu Gly Ser Cys Ile Thr Asp |     |     |
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| Pro Gly Asn Arg Glu Thr Ser Gly Asn Thr Met His Thr Val Phe His |     |     |
| 530   | 535 | 540 |
| Arg Asp Lys Thr Lys Asp Thr His Pro Glu Ser Cys Cys Ser Ser Glu |     |     |
| 545   | 550 | 555 |
| Lys Gly Gly Gln Pro Leu Pro Trp Phe Glu His Arg Lys Asn Val Pro |     |     |
| 565   | 570 | 575 |
| Gln Phe Ala Glu Pro Thr Glu Thr Leu Phe Gly Pro Asp Ser Gly Lys |     |     |
| 580   | 585 | 590 |
| Gly Ala Lys Ser Leu Val Glu Leu Leu Asp Glu Ser Glu Cys Thr Ser |     |     |
| 595   | 600 | 605 |
| Asp Glu Glu Ile Phe Ile Ser Gln Asp Glu Ile Gln Ser Phe Met Ala |     |     |
| 610   | 615 | 620 |
| Asn Asn Gln Ser Phe Tyr Ser Asn Arg Glu Gln Tyr Arg Gln His Leu |     |     |
| 625   | 630 | 635 |
| Lys Glu Lys Phe Asn Lys Tyr Cys Arg Leu Asn Asp His Lys Arg Pro |     |     |
| 645   | 650 | 655 |
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| 660   | 665 |     |

&lt;210&gt; 2831

&lt;211&gt; 3986

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2831

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780

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<210> 2832  
 <211> 611  
 <212> PRT  
 <213> Homo sapiens

<400> 2832

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          20           25           30
Gly Thr Arg Thr Ser Ser Gly Arg Leu Arg Arg Leu Gly Asp Ser Ser
      35           40           45
Gly Pro Ala Leu Lys Arg Ser Phe Glu Val Glu Glu Val Glu Thr Pro
      50           55           60
Asn Ser Thr Pro Pro Arg Arg Val Gln Thr Pro Leu Leu Arg Ala Thr
65           70           75           80
Val Ala Ser Ser Thr Gln Lys Phe Gln Asp Leu Gly Val Lys Asn Ser
          85           90           95
Glu Pro Ser Ala Arg His Val Asp Ser Leu Ser Gln Arg Ser Pro Lys
          100          105          110
Ala Ser Leu Arg Arg Val Glu Leu Ser Gly Pro Lys Ala Ala Glu Pro
          115          120          125
Val Ser Arg Arg Thr Glu Leu Ser Ile Asp Ile Ser Ser Lys Gln Val
      130          135          140
Glu Asn Ala Gly Ala Ile Gly Pro Ser Arg Phe Gly Leu Lys Arg Ala
145          150          155          160
Glu Val Leu Gly His Lys Thr Pro Glu Pro Ala Pro Arg Arg Thr Glu
          165          170          175
Ile Thr Ile Val Lys Pro Gln Glu Ser Ala His Arg Arg Met Glu Pro
          180          185          190
Pro Ala Ser Lys Val Pro Glu Val Pro Thr Ala Pro Ala Thr Asp Ala
          195          200          205
Ala Pro Lys Arg Val Glu Ile Gln Met Pro Lys Pro Ala Glu Ala Pro
      210          215          220
Thr Ala Pro Ser Pro Ala Gln Thr Leu Glu Asn Ser Glu Pro Ala Pro
225          230          235          240
Val Ser Gln Leu Gln Ser Arg Leu Glu Pro Lys Pro Gln Pro Pro Val
          245          250          255
Ala Glu Ala Thr Pro Arg Ser Gln Glu Ala Thr Glu Ala Ala Pro Ser
          260          265          270
Cys Val Gly Asp Met Ala Asp Thr Pro Arg Asp Ala Gly Leu Lys Gln
          275          280          285
Ala Pro Ala Ser Arg Asn Glu Lys Ala Pro Val Asp Phe Gly Tyr Val
      290          295          300
Gly Ile Asp Ser Ile Leu Glu Gln Met Arg Arg Lys Ala Met Lys Gln
305          310          315          320
Gly Phe Glu Phe Asn Ile Met Val Val Gly Gln Ser Gly Leu Gly Lys
          325          330          335
Ser Thr Leu Ile Asn Thr Leu Phe Lys Ser Lys Ile Ser Arg Lys Ser
          340          345          350
Val Gln Pro Thr Ser Glu Glu Arg Ile Pro Lys Thr Ile Glu Ile Lys
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Ser Ile Thr His Asp Ile Glu Glu Lys Gly Val Arg Met Lys Leu Thr

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|   |     |     |     |     |
|---|-----|-----|-----|-----|
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| Val Ile Asp Thr Pro Gly Phe Gly Asp His Ile Asn Asn Glu Asn Cys |     |     |     |     |
| 385   |     | 390 |     | 395 |
| Trp Gln Pro Ile Met Lys Phe Ile Asn Asp Gln Tyr Glu Lys Tyr Leu |     |     |     | 400 |
|   | 405 |     | 410 | 415 |
| Gln Glu Glu Val Asn Ile Asn Arg Lys Lys Arg Ile Pro Asp Thr Arg |     |     |     |     |
|   | 420 |     | 425 | 430 |
| Val His Cys Cys Leu Tyr Phe Ile Pro Ala Thr Gly His Ser Leu Arg |     |     |     |     |
|   | 435 |     | 440 | 445 |
| Pro Leu Asp Ile Glu Phe Met Lys Arg Leu Ser Lys Val Val Asn Ile |     |     |     |     |
|   | 450 |     | 455 | 460 |
| Val Pro Val Ile Ala Lys Ala Asp Thr Leu Thr Leu Glu Glu Arg Val |     |     |     |     |
| 465   |     | 470 |     | 475 |
| His Phe Lys Gln Arg Ile Thr Ala Asp Leu Leu Ser Asn Gly Ile Asp |     |     |     |     |
|   | 485 |     | 490 | 495 |
| Val Tyr Pro Gln Lys Glu Phe Asp Glu Asp Ser Glu Asp Arg Leu Val |     |     |     |     |
|   | 500 |     | 505 | 510 |
| Asn Glu Lys Phe Arg Glu Met Ile Pro Phe Ala Val Val Gly Ser Asp |     |     |     |     |
|   | 515 |     | 520 | 525 |
| His Glu Tyr Gln Val Asn Gly Lys Arg Ile Leu Gly Arg Lys Thr Lys |     |     |     |     |
|   | 530 |     | 535 | 540 |
| Trp Gly Thr Ile Glu Val Glu Asn Thr Thr His Cys Glu Phe Ala Tyr |     |     |     |     |
| 545   |     | 550 |     | 555 |
| Leu Arg Asp Leu Leu Ile Arg Thr His Met Gln Asn Ile Lys Asp Ile |     |     |     |     |
|   | 565 |     | 570 | 575 |
| Thr Ser Ser Ile His Phe Glu Ala Tyr Arg Val Lys Arg Leu Asn Glu |     |     |     |     |
|   | 580 |     | 585 | 590 |
| Gly Ser Ser Ala Met Ala Asn Gly Val Glu Glu Lys Glu Pro Glu Ala |     |     |     |     |
|   | 595 |     | 600 | 605 |
| Pro Glu Met   |     |     |     |     |
| 610   |     |     |     |     |

&lt;210&gt; 2833

&lt;211&gt; 420

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2833

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&lt;210&gt; 2834

&lt;211&gt; 117

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2834

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Leu Leu Arg Leu Leu Arg Ser Pro Thr Leu Arg Gly His Gly Gly Ala
      20           25           30
Ser Gly Arg Asn Val Thr Thr Gly Ser Leu Gly Glu Pro Gln Trp Leu
      35           40           45
Arg Val Ala Thr Gly Gly Arg Pro Gly Thr Ser Pro Ala Leu Phe Ser
      50           55           60
Gly Arg Gly Ala Ala Thr Gly Gly Arg Gln Gly Gly Arg Phe Asp Thr
      65           70           75           80
Lys Cys Leu Ala Ala Ala Thr Trp Gly Arg Leu Pro Gly Pro Glu Glu
      85           90           95
Thr Leu Pro Gly Gln Asp Ser Trp Asn Gly Val Pro Ser Arg Ala Gly
      100          105          110
Leu Gly Met Cys Ala
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&lt;210&gt; 2835

&lt;211&gt; 938

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2835

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 Thr Leu Ser Val Arg Gly Glu Asp Ile Gly Glu Asp Leu Phe Ser Glu  
 50 55 60  
 Ala Leu Gly Arg Ala Val Gly Gln Trp Ala Gly Ala Lys Leu Leu Asp  
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 Pro His Tyr Glu Val Phe Val Ala Leu Arg Gly Leu Arg Asn Leu Ser  
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 Glu Glu Asn Arg Asp Lys Leu Asp His Cys Leu Gln Glu Ala Ser Pro  
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 Arg Tyr Lys Ser Leu Arg Phe Trp Gly Ser Val Gly Pro Ala Glu Ser  
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&lt;210&gt; 2838

&lt;211&gt; 370

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2838

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 Ser Glu Glu Glu Glu Ala Asn Tyr Trp Lys Asp Leu Ala Met Thr Tyr  
 35 40 45  
 Lys Gln Arg Ala Glu Asn Thr Gln Glu Glu Leu Arg Glu Phe Gln Glu  
 50 55 60  
 Gly Ser Arg Glu Tyr Glu Ala Glu Leu Glu Thr Gln Leu Gln Gln Ile  
 65 70 75 80  
 Glu Thr Arg Asn Arg Asp Leu Leu Ser Glu Asn Asn Arg Leu Arg Met  
 85 90 95  
 Glu Leu Glu Thr Ile Lys Glu Lys Phe Glu Val Gln His Ser Glu Gly  
 100 105 110  
 Tyr Arg Gln Ile Ser Ala Leu Glu Asp Asp Leu Ala Gln Thr Lys Ala

115 120 125  
 Ile Lys Asp Gln Leu Gln Lys Tyr Ile Arg Glu Leu Glu Gln Ala Asn  
 130 135 140  
 Asp Ala Leu Glu Arg Ala Lys Arg Ala Thr Ile Met Ser Leu Glu Asp  
 145 150 155 160  
 Phe Glu Gln Arg Leu Asn Gln Ala Ile Glu Arg Asn Ala Phe Leu Glu  
 165 170 175  
 Ser Glu Leu Asp Glu Lys Glu Asn Leu Leu Glu Ser Val Gln Arg Leu  
 180 185 190  
 Lys Asp Glu Ala Arg Asp Leu Arg Gln Glu Leu Ala Val Gln Gln Lys  
 195 200 205  
 Gln Glu Lys Pro Arg Thr Pro Met Pro Ser Ser Val Glu Ala Glu Arg  
 210 215 220  
 Thr Asp Thr Ala Val Gln Ala Thr Gly Ser Val Pro Ser Thr Pro Ile  
 225 230 235 240  
 Ala His Arg Gly Pro Ser Ser Ser Leu Asn Thr Pro Gly Ser Phe Arg  
 245 250 255  
 Arg Gly Leu Asp Asp Xaa His Arg Gly Thr Pro Leu Thr Pro Ala Ala  
 260 265 270  
 Arg Ile Ser Ala Leu Asn Ile Val Gly Asp Leu Leu Arg Lys Val Gly  
 275 280 285  
 Ala Leu Glu Ser Lys Leu Ala Ser Cys Arg Asn Leu Val Tyr Asp Gln  
 290 295 300  
 Ser Pro Asn Arg Thr Gly Gly Pro Ala Ser Gly Arg Ser Ser Lys Asn  
 305 310 315 320  
 Arg Asp Gly Gly Glu Arg Arg Pro Ser Ser Thr Ser Val Pro Leu Gly  
 325 330 335  
 Asp Lys Gly Ser Val Pro Ser Asn Lys Pro Leu Ala Gly Gly Glu Asn  
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 Ser Phe  
 370

&lt;210&gt; 2839

&lt;211&gt; 606

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2839

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 <212> PRT  
 <213> Homo sapiens

<400> 2840  
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 35 40 45  
 Pro Tyr Gln Pro Asn Glu Tyr Leu Lys Ala Leu Val Ala Val Gly Glu  
 50 55 60  
 Ile Cys Gln Asp Tyr Asp Ser Asp Lys Met Phe Pro Ala Phe Gly Phe  
 65 70 75 80  
 Gly Ala Arg Ile Pro Pro Glu Tyr Thr Val Ser His Asp Phe Ala Ile  
 85 90 95  
 Asn Phe Asn Glu Asp Asn Pro Glu Cys Ala Gly Ile Gln Gly Val Val  
 100 105 110  
 Glu Ala Tyr Gln Ser Cys Leu Pro Lys Leu Gln Leu Tyr Gly Pro Thr  
 115 120 125  
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 130 135 140  
 Thr Asn Thr Lys Glu Ala Ser Gln Tyr Phe Ile Leu Leu Ile Leu Thr  
 145 150 155 160  
 Asp Gly Val Ile Thr Asp Met Gly Asp Thr Arg Glu Ala Ile Val His  
 165 170 175  
 Ala Ser His Leu Pro Met Ser Val Ile Ile Val Gly Val Gly Asn Ala  
 180 185 190  
 Asp Phe Ser Asp Met Gln Met Leu Asp Gly  
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 <211> 2065  
 <212> DNA  
 <213> Homo sapiens

<400> 2841  
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240  
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1800

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 1920  
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<210> 2842

<211> 540

<212> PRT

<213> Homo sapiens

<400> 2842

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | Ser | Pro | Pro | Ala | Tyr | Pro | Gly | Ile | Arg | Ile | Ser | Gly | Cys | Arg | 1   | 5   | 10  | 15  |
| Ala | Leu | Gly | Ala | Glu | Gly | Ser | Asn | Ala | Glu | Ser | Leu | Asp | Arg | Leu | Leu | 20  | 25  | 30  |     |
| Pro | Pro | Val | Gly | Thr | Gly | Arg | Ser | Pro | Arg | Lys | Arg | Thr | Thr | Ser | Gln | 35  | 40  | 45  |     |
| Cys | Lys | Ser | Glu | Pro | Pro | Leu | Leu | Arg | Thr | Ser | Lys | Arg | Thr | Ile | Tyr | 50  | 55  | 60  |     |
| Thr | Ala | Gly | Arg | Pro | Pro | Trp | Tyr | Asn | Glu | His | Gly | Thr | Gln | Ser | Lys | 65  | 70  | 75  | 80  |
| Glu | Ala | Phe | Ala | Ile | Gly | Leu | Gly | Gly | Gly | Ser | Ala | Ser | Gly | Lys | Thr | 85  | 90  | 95  |     |
| Thr | Val | Ala | Arg | Met | Ile | Ile | Glu | Ala | Leu | Asp | Val | Pro | Trp | Val | Val | 100 | 105 | 110 |     |
| Leu | Leu | Ser | Met | Asp | Ser | Phe | Tyr | Lys | Val | Leu | His | Ser | Leu | Pro | His | 115 | 120 | 125 |     |
| Gln | Val | Leu | Thr | Glu | Gln | Gln | Gln | Glu | Gln | Ala | Ala | His | Asn | Asn | Phe | 130 | 135 | 140 |     |
| Asn | Phe | Asp | His | Pro | Asp | Ala | Phe | Asp | Phe | Asp | Leu | Ile | Ile | Ser | Thr | 145 | 150 | 155 | 160 |
| Leu | Lys | Lys | Leu | Lys | Gln | Gly | Lys | Ser | Val | Lys | Val | Pro | Ile | Tyr | Asp | 165 | 170 | 175 |     |
| Phe | Thr | Thr | His | Ser | Arg | Lys | Lys | Asp | Trp | Lys | Thr | Leu | Tyr | Gly | Ala | 180 | 185 | 190 |     |
| Asn | Val | Ile | Ile | Phe | Glu | Gly | Ile | Met | Ala | Phe | Ala | Asp | Lys | Thr | Leu | 195 | 200 | 205 |     |
| Leu | Glu | Leu | Leu | Asp | Met | Lys | Ile | Phe | Val | Asp | Thr | Asp | Ser | Asp | Ile | 210 | 215 | 220 |     |
| Arg | Leu | Val | Arg | Arg | Leu | Arg | Arg | Asp | Ile | Ser | Glu | Arg | Gly | Arg | Asp | 225 | 230 | 235 | 240 |
| Ile | Glu | Gly | Val | Ile | Lys | Gln | Tyr | Asn | Lys | Phe | Val | Lys | Pro | Ser | Phe | 245 | 250 | 255 |     |
| Asp | Gln | Tyr | Ile | Gln | Pro | Thr | Met | Arg | Leu | Ala | Asp | Ile | Val | Val | Pro | 260 | 265 | 270 |     |
| Arg | Gly | Ser | Gly | Asn | Thr | Val | Ala | Ile | Asp | Leu | Ile | Val | Gln | His | Val | 275 | 280 | 285 |     |
| His | Ser | Gln | Leu | Glu | Glu | Arg | Glu | Leu | Ser | Val | Arg | Ala | Ala | Leu | Ala |     |     |     |     |

|   |     |     |
|---|-----|-----|
| 290   | 295 | 300 |
| Ser Ala His Gln Cys His Pro Leu Pro Arg Thr Leu Ser Val Leu Lys |     |     |
| 305   | 310 | 315 |
| Ser Thr Pro Gln Val Arg Gly Met His Thr Ile Ile Arg Asp Lys Glu |     | 320 |
|   | 325 | 330 |
| Thr Ser Arg Asp Glu Phe Ile Phe Tyr Ser Lys Arg Leu Met Arg Leu |     | 335 |
|   | 340 | 345 |
| Leu Ile Glu His Ala Leu Ser Phe Leu Pro Phe Gln Asp Cys Val Val |     | 350 |
|   | 355 | 360 |
| Gln Thr Pro Gln Gly Gln Asp Tyr Ala Gly Lys Cys Tyr Ala Gly Lys |     | 365 |
|   | 370 | 375 |
| Gln Ile Thr Gly Val Ser Ile Leu Arg Ala Gly Glu Thr Met Glu Pro |     | 380 |
| 385   | 390 | 395 |
| Ala Leu Arg Ala Val Cys Lys Asp Val Arg Ile Gly Thr Ile Leu Ile |     | 400 |
|   | 405 | 410 |
| Gln Thr Asn Gln Leu Thr Gly Glu Pro Glu Leu His Tyr Leu Arg Leu |     | 415 |
|   | 420 | 425 |
| Pro Lys Asp Ile Ser Asp Asp His Val Ile Leu Met Asp Cys Thr Val |     | 430 |
|   | 435 | 440 |
| Ser Thr Gly Ala Ala Ala Met Met Ala Val Arg Val Leu Leu Asp His |     | 445 |
|   | 450 | 455 |
| Asp Val Pro Glu Asp Lys Ile Phe Leu Leu Ser Leu Leu Met Ala Glu |     | 460 |
| 465   | 470 | 475 |
| Met Gly Val His Ser Val Ala Tyr Ala Phe Pro Arg Val Arg Ile Ile |     | 480 |
|   | 485 | 490 |
| Thr Thr Ala Val Asp Lys Arg Val Asn Asp Leu Phe Arg Ile Ile Pro |     | 495 |
|   | 500 | 505 |
| Gly Ile Gly Asn Phe Gly Asp Arg Tyr Phe Gly Thr Asp Ala Val Pro |     | 510 |
|   | 515 | 520 |
| Asp Gly Ser Asp Glu Glu Glu Val Ala Tyr Thr Gly                 |     | 525 |
| 530   | 535 | 540 |

<210> 2843  
 <211> 497  
 <212> DNA  
 <213> Homo sapiens

<400> 2843  
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 180  
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 240  
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 360  
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497

<210> 2844  
<211> 165  
<212> PRT  
<213> Homo sapiens

<400> 2844  
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35 40 45  
Ser Ser Lys Phe Gln Glu Gly Ala Glu Met Leu Leu Asn Pro Glu Glu  
50 55 60  
Lys Ser Pro Leu Asn Ile Ser Val Gly Val His Pro Leu Asp Ser Phe  
65 70 75 80  
Thr Gln Gly Phe Gly Glu Gln Pro Thr Gly Asp Leu Pro Ile Gly Pro  
85 90 95  
Pro Phe Glu Met Pro Thr Gly Ala Leu Leu Ser Thr Pro Gln Phe Glu  
100 105 110  
Met Leu Gln Asn Pro Leu Gly Leu Thr Gly Ala Leu Arg Gly Pro Gly  
115 120 125  
Arg Arg Gly Gly Arg Ala Arg Gly Gly Gln Gly Pro Arg Pro Asn Ile  
130 135 140  
Cys Gly Ile Trp Gly Lys Ser Phe Gly Arg Asp Tyr Pro Asp Pro Ala  
145 150 155 160  
Gln Ala Ser Thr Pro  
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<210> 2845  
<211> 934  
<212> DNA  
<213> Homo sapiens

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120  
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180  
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240  
gacctccagt tgcaacgtct cccccgcgt gagtggggtt atcaggccta gctcaccttg  
300  
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360  
acagcacaca aaaatagttc tcacgttgcc gtggagagac aagcagtcaa cgcagatata  
420  
tcctgtggca agtgatggta aatgctgtgg caagaaagca gggtctggag gtgaagggcg  
480

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 720  
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<210> 2846  
 <211> 149  
 <212> PRT  
 <213> Homo sapiens

<400> 2846  
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 35 40 45  
 Pro His Arg Pro Ser Pro Pro Glu Pro Ala Phe Leu Pro Gln His Leu  
 50 55 60  
 Pro Ser Leu Ala Thr Gly Tyr Ile Cys Val Asp Cys Leu Ser Leu His  
 65 70 75 80  
 Gly Asn Val Arg Thr Ile Phe Val Cys Cys Gly Thr Ala Ala Leu Arg  
 85 90 95  
 Ala Ala Ser Ser Thr Gln Val Ala Leu Asp Thr Asp Cys Thr Gln Gly  
 100 105 110  
 Glu Leu Gly Leu Ile Thr Pro Leu Thr Arg Gly Glu Thr Leu Gln Leu  
 115 120 125  
 Glu Val Thr Phe Ile Pro Leu Gln Leu Arg Pro Phe His Ser Pro Arg  
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 Thr His Arg Gly Ala  
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<210> 2847  
 <211> 2830  
 <212> DNA  
 <213> Homo sapiens

<400> 2847  
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cagctctcac atgaccacga atctgttggc cctcctagcc tggatgctca gcccaactca  
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240  
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300  
tcagaagact ctgggtccag aaaagattct tcctcagagg tcttcagtga tgctgccaag  
360  
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420  
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720  
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840  
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900  
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960  
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1020  
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1080  
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ttcacaaatg ataaatatgc tgattttatt gaagccaatc gttaaagaaga tcctctagat  
1320  
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1380  
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1440  
ccaagaaacc tagcaatagt gtttgggtccc acccttggtc gaacatcaga agacaacatg  
1500  
accacatgg tcacccacat gcctgaccag tacaagattg tagaaacgct catccagcac  
1560  
catgactgg ttttcacaga agaagggtgt gaagagcctc ttacaacagt gcaggaggaa  
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&lt;210&gt; 2848

&lt;211&gt; 856

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2848

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Asp | His | Asp | Ile | Ala | His | Ile | Pro | Ala | Ser | Ala | Val | Ile | Ser | Ala |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Ser | Thr | Ser | Gln | Val | Pro | Ser | Ile | Ala | Thr | Val | Pro | Pro | Cys | Leu | Thr |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Thr | Ser | Ala | Pro | Leu | Ile | Arg | Arg | Gln | Leu | Ser | His | Asp | His | Glu | Ser |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Val | Gly | Pro | Pro | Ser | Leu | Asp | Ala | Gln | Pro | Asn | Ser | Lys | Thr | Glu | Arg |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Ser | Lys | Ser | Tyr | Asp | Glu | Gly | Leu | Asp | Asp | Tyr | Arg | Glu | Asp | Ala | Lys |



|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Leu | Ser | Phe | Lys | His | Val | Ser | Ser | Leu | Lys | Gly | Ile | Lys | Ile | Ala | Asp |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ser | Gln | Lys | Ser | Ser | Glu | Asp | Ser | Gly | Ser | Arg | Lys | Asp | Ser | Ser | Ser |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Glu | Val | Phe | Ser | Asp | Ala | Ala | Lys | Glu | Gly | Trp | Leu | His | Phe | Arg | Pro |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Leu | Val | Thr | Asp | Lys | Gly | Lys | Arg | Val | Gly | Gly | Ser | Ile | Arg | Pro | Trp |
|     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |     |
| Lys | Gln | Met | Tyr | Val | Val | Leu | Arg | Gly | His | Ser | Leu | Tyr | Leu | Tyr | Lys |
| 145 |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     |     | 160 |
| Asp | Lys | Arg | Glu | Gln | Thr | Thr | Pro | Ser | Glu | Glu | Glu | Gln | Pro | Ile | Ser |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Val | Asn | Ala | Cys | Leu | Ile | Asp | Ile | Ser | Tyr | Ser | Glu | Thr | Lys | Arg | Lys |
|     |     | 180 |     |     |     |     | 185 |     |     |     |     |     | 190 |     |     |
| Asn | Val | Phe | Arg | Leu | Thr | Thr | Ser | Asp | Cys | Glu | Cys | Leu | Phe | Gln | Ala |
|     | 195 |     |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Glu | Asp | Arg | Asp | Asp | Met | Leu | Ala | Trp | Ile | Lys | Thr | Ile | Gln | Glu | Ser |
|     | 210 |     |     |     | 215 |     |     |     |     |     | 220 |     |     |     |     |
| Ser | Asn | Leu | Asn | Glu | Glu | Asp | Thr | Gly | Val | Thr | Asn | Arg | Asp | Leu | Ile |
| 225 |     |     |     | 230 |     |     |     |     |     | 235 |     |     |     |     | 240 |
| Ser | Arg | Arg | Ile | Lys | Glu | Tyr | Asn | Asn | Leu | Met | Ser | Lys | Ala | Glu | Gln |
|     |     |     | 245 |     |     |     |     | 250 |     |     |     |     |     | 255 |     |
| Leu | Pro | Lys | Thr | Pro | Arg | Gln | Ser | Leu | Ser | Ile | Arg | Gln | Thr | Leu | Leu |
|     |     | 260 |     |     |     |     | 265 |     |     |     |     |     | 270 |     |     |
| Gly | Ala | Lys | Ser | Glu | Pro | Lys | Thr | Gln | Ser | Pro | His | Ser | Pro | Lys | Glu |
|     | 275 |     |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |
| Glu | Ser | Glu | Arg | Lys | Leu | Leu | Ser | Lys | Asp | Asp | Thr | Ser | Pro | Pro | Lys |
|     | 290 |     |     |     | 295 |     |     |     |     | 300 |     |     |     |     |     |
| Asp | Lys | Gly | Thr | Trp | Arg | Lys | Gly | Ile | Pro | Ser | Ile | Met | Arg | Lys | Thr |
| 305 |     |     |     | 310 |     |     |     |     |     | 315 |     |     |     |     | 320 |
| Phe | Glu | Lys | Lys | Pro | Thr | Ala | Thr | Gly | Thr | Phe | Gly | Val | Arg | Leu | Asp |
|     |     |     | 325 |     |     |     |     | 330 |     |     |     |     |     | 335 |     |
| Asp | Cys | Pro | Pro | Ala | His | Thr | Asn | Arg | Tyr | Ile | Pro | Leu | Ile | Val | Asp |
|     |     | 340 |     |     |     |     | 345 |     |     |     |     |     | 350 |     |     |
| Ile | Cys | Cys | Lys | Leu | Val | Glu | Glu | Arg | Gly | Leu | Glu | Tyr | Thr | Gly | Ile |
|     | 355 |     |     |     |     | 360 |     |     |     |     |     | 365 |     |     |     |
| Tyr | Arg | Val | Pro | Gly | Asn | Asn | Ala | Ala | Ile | Ser | Ser | Met | Gln | Glu | Glu |
|     | 370 |     |     |     | 375 |     |     |     |     | 380 |     |     |     |     |     |
| Leu | Asn | Lys | Gly | Met | Ala | Asp | Ile | Asp | Ile | Gln | Asp | Asp | Lys | Trp | Arg |
| 385 |     |     |     | 390 |     |     |     |     |     | 395 |     |     |     |     | 400 |
| Asp | Leu | Asn | Val | Ile | Ser | Ser | Leu | Leu | Lys | Ser | Phe | Phe | Arg | Lys | Leu |
|     |     | 405 |     |     |     |     |     | 410 |     |     |     |     |     | 415 |     |
| Pro | Glu | Pro | Leu | Phe | Thr | Asn | Asp | Lys | Tyr | Ala | Asp | Phe | Ile | Glu | Ala |
|     |     | 420 |     |     |     |     | 425 |     |     |     |     |     | 430 |     |     |
| Asn | Arg | Lys | Glu | Asp | Pro | Leu | Asp | Arg | Leu | Lys | Thr | Leu | Lys | Arg | Leu |
|     | 435 |     |     |     |     |     | 440 |     |     |     |     | 445 |     |     |     |
| Ile | His | Asp | Leu | Pro | Glu | His | His | Tyr | Glu | Thr | Leu | Lys | Phe | Leu | Ser |
|     | 450 |     |     |     |     | 455 |     |     |     | 460 |     |     |     |     |     |
| Ala | His | Leu | Lys | Thr | Val | Ala | Glu | Asn | Ser | Glu | Lys | Asn | Lys | Met | Glu |
| 465 |     |     |     | 470 |     |     |     |     |     | 475 |     |     |     |     | 480 |
| Pro | Arg | Asn | Leu | Ala | Ile | Val | Phe | Gly | Pro | Thr | Leu | Val | Arg | Thr | Ser |
|     |     |     | 485 |     |     |     |     | 490 |     |     |     |     |     | 495 |     |
| Glu | Asp | Asn | Met | Thr | His | Met | Val | Thr | His | Met | Pro | Asp | Gln | Tyr | Lys |

2083

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<210> 2850

<211> 76

<212> PRT

<213> Homo sapiens

<400> 2850

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| Glu | Ala | Lys | Asp | Thr | Glu | Ser | Val | Met | Ala | Pro | Lys | Ala | Ala | Lys | Gly |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Ala | Lys | Pro | Glu | Pro | Ala | Pro | Ala | Pro | Pro | Pro | Pro | Gly | Ala | Lys | Pro |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Glu | Glu | Asp | Lys | Lys | Asp | Gly | Lys | Glu | Pro | Ser | Asp | Lys | Pro | Gln | Lys |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |
| Ala | Val | Gln | Asp | His | Lys | Glu | Pro | Ser | Asp | Lys | Pro | Gln | Lys | Ala | Val |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Gln | Pro | Lys | His | Glu | Val | Gly | Thr | Lys | Glu | Gly | Cys |     |     |     |     |
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<211> 2459

<212> DNA

<213> Homo sapiens

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<210> 2852

<211> 317

<212> PRT

<213> Homo sapiens

<400> 2852

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ile | Arg | Gln | Met | Met | Ile | Lys | Ile | Phe | Arg | Cys | Ile | Glu | Pro | Glu |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Leu | Asn | Asn | Leu | Ile | Ala | Leu | Gly | Asp | Lys | Ile | Asp | Ser | Phe | Asn | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Leu | Tyr | Met | Leu | Val | Lys | Met | Ser | His | His | Val | Trp | Thr | Ala | Gln | Asn |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |
| Val | Asp | Pro | Ala | Ser | Phe | Leu | Ser | Thr | Thr | Leu | Gly | Asn | Val | Leu | Val |
|     |     |     | 50  |     |     |     | 55  |     |     |     | 60  |     |     |     |     |
| Thr | Val | Lys | Arg | Asn | Phe | Asp | Lys | Cys | Ile | Ser | Asn | Gln | Ile | Arg | Gln |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Met | Glu | Glu | Val | Lys | Ile | Ser | Lys | Lys | Ser | Lys | Val | Gly | Ile | Leu | Pro |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Phe | Val | Ala | Glu | Phe | Glu | Glu | Phe | Ala | Gly | Leu | Ala | Glu | Ser | Ile | Phe |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     |     | 110 |     |
| Lys | Asn | Ala | Glu | Arg | Arg | Gly | Asp | Leu | Asp | Lys | Ala | Tyr | Thr | Lys | Leu |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     |     | 125 |     |     |
| Ile | Arg | Gly | Val | Phe | Val | Asn | Val | Glu | Lys | Val | Ala | Asn | Glu | Ser | Gln |
|     |     |     | 130 |     |     |     | 135 |     |     |     |     |     | 140 |     |     |
| Lys | Thr | Pro | Arg | Asp | Val | Val | Met | Met | Glu | Asn | Phe | His | His | Ile | Phe |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Ala | Thr | Leu | Ser | Arg | Leu | Lys | Ile | Ser | Cys | Leu | Glu | Ala | Glu | Lys | Lys |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Glu | Ala | Lys | Gln | Lys | Tyr | Thr | Asp | His | Leu | Gln | Ser | Tyr | Val | Ile | Tyr |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Ser | Leu | Gly | Gln | Pro | Leu | Glu | Lys | Leu | Asn | His | Phe | Phe | Glu | Gly | Val |
|     |     |     | 195 |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Glu | Ala | Arg | Val | Ala | Gln | Gly | Ile | Arg | Glu | Glu | Glu | Val | Ser | Tyr | Gln |
|     |     |     | 210 |     |     |     | 215 |     |     |     |     | 220 |     |     |     |
| Leu | Ala | Phe | Asn | Lys | Gln | Glu | Leu | Arg | Lys | Val | Ile | Lys | Glu | Tyr | Pro |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     | 240 |     |
| Gly | Lys | Glu | Val | Lys | Lys | Gly | Leu | Asp | Asn | Leu | Tyr | Lys | Lys | Val | Asp |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Lys | His | Leu | Cys | Glu | Glu | Glu | Asn | Leu | Leu | Gln | Val | Val | Trp | His | Ser |
|     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |     |     |
| Met | Gln | Asp | Glu | Phe | Ile | Arg | Gln | Tyr | Lys | His | Phe | Glu | Gly | Leu | Ile |
|     |     |     | 275 |     |     |     | 280 |     |     |     |     | 285 |     |     |     |
| Ala | Arg | Cys | Tyr | Pro | Gly | Ser | Gly | Val | Thr | Met | Glu | Phe | Thr | Ile | Gln |

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<211> 4993

<212> DNA

<213> Homo sapiens

<400> 2853

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<400> 2854

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| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Glu | Leu | Phe | Phe | Lys | Asp | Asp | Pro | Glu | Lys | Leu | Phe | Ser | Asp | Leu | Arg |
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| Glu | Ile | Gly | His | Gly | Ser | Phe | Gly | Ala | Val | Tyr | Phe | Ala | Arg | Asp | Val |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Arg | Asn | Ser | Glu | Val | Val | Ala | Ile | Lys | Lys | Met | Ser | Tyr | Ser | Gly | Lys |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Gln | Ser | Asn | Glu | Lys | Trp | Gln | Asp | Ile | Ile | Lys | Glu | Val | Arg | Phe | Leu |
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| Gln | Lys | Leu | Arg | His | Pro | Asn | Thr | Ile | Gln | Tyr | Arg | Gly | Cys | Tyr | Leu |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Arg | Glu | His | Thr | Ala | Trp | Leu | Val | Met | Glu | Tyr | Cys | Leu | Gly | Ser | Ala |
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| Ser | Asp | Leu | Leu | Glu | Val | His | Lys | Pro | Leu | Gln | Glu | Val | Glu | Ile |     |
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| Ala | Ala | Val | Thr | His | Gly | Ala | Leu | Gln | Gly | Leu | Ala | Tyr | Leu | His | Ser |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| His | Asn | Met | Ile | His | Arg | Asp | Val | Lys | Ala | Gly | Asn | Ile | Leu | Leu | Ser |
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| Glu | Pro | Gly | Leu | Val | Lys | Leu | Gly | Asp | Phe | Gly | Ser | Ala | Ser | Ile | Met |
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| Val | Ile | Leu | Ala | Met | Asp | Glu | Gly | Gln | Tyr | Asp | Gly | Lys | Val | Asp | Val |
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| Leu | Phe | Asn | Met | Asn | Ala | Met | Ser | Ala | Leu | Tyr | His | Ile | Ala | Gln | Asn |
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| Glu | Ser | Pro | Val | Leu | Gln | Ser | Gly | His | Trp | Ser | Glu | Tyr | Phe | Arg | Asn |

2091

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| Glu Leu Glu Leu Arg Gln   | Leu Gln Ala Val Gln Arg Thr Arg Ala Glu |      |
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| Leu Thr Arg Leu Gln His Gln Thr Glu Leu Gly Asn Gln Leu Glu Tyr |   |      |
| 705   | 710                                     | 715  |
| Asn Lys Arg Arg Glu Gln Glu Leu Arg Gln Lys His Ala Ala Gln Val |   |      |
| 725   | 730                                     | 735  |
| Arg Gln Gln Pro Lys Ser Leu Lys Val Arg Ala Gly Gln Arg Pro Pro |   |      |
| 740   | 745                                     | 750  |
| Gly Leu Pro Leu Pro Ile Pro Gly Ala Leu Gly Pro Pro Asn Thr Gly |   |      |
| 755   | 760                                     | 765  |
| Thr Pro Ile Glu Gln Gln Pro Cys Ser Pro Gly Gln Glu Ala Val Leu |   |      |
| 770   | 775                                     | 780  |
| Asp Gln Arg Met Leu Gly Glu Glu Glu Glu Ala Val Gly Glu Arg Arg |   |      |
| 785   | 790                                     | 795  |
| Ile Leu Gly Lys Glu Gly Ala Thr Leu Glu Pro Lys Gln Gln Arg Ile |   |      |
| 805   | 810                                     | 815  |
| Leu Gly Glu Glu Ser Gly Ala Pro Ser Pro Ser Pro Gln Lys His Gly |   |      |
| 820   | 825                                     | 830  |
| Ser Leu Val Asp Glu Glu Val Trp Gly Leu Pro Glu Glu Ile Glu Glu |   |      |
| 835   | 840                                     | 845  |
| Leu Arg Val Pro Ser Leu Val Pro Gln Glu Arg Ser Ile Val Gly Gln |   |      |
| 850   | 855                                     | 860  |
| Glu Glu Ala Gly Thr Trp Ser Leu Trp Gly Lys Glu Asp Glu Ser Leu |   |      |
| 865   | 870                                     | 875  |
| Leu Asp Glu Glu Phe Glu Leu Gly Trp Val Gln Gly Pro Ala Leu Thr |   |      |
| 885   | 890                                     | 895  |
| Pro Val Pro Glu Glu Glu Glu Glu Glu Glu Gly Ala Pro Ile Gly     |   |      |
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| Thr Pro Arg Asp Pro Gly Asp Gly Cys Pro Ser Pro Asp Ile Pro Pro |   |      |
| 915   | 920                                     | 925  |
| Glu Pro Pro Pro Thr His Leu Arg Pro Cys Pro Ala Ser Gln Leu Pro |   |      |
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| 945   | 950                                     | 955  |
| Ser Ser Ser Gly Leu Leu Pro Leu Leu Leu Leu Leu Leu Pro Leu     |   |      |
| 965   | 970                                     | 975  |
| Leu Ala Ala Gln Gly Gly Gly Gly Leu Gln Ala Ala Leu Leu Ala Leu |   |      |
| 980   | 985                                     | 990  |
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| 995   | 1000                                    | 1005 |
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| Ala Leu Gly Ala Val Leu Gly Leu Ser Trp Arg Arg Gly Leu Met Gly |   |      |
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| 1090  | 1095                                    | 1100 |
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&lt;211&gt; 401

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| Thr | Ser | Ala | Ala | Ser | Gly | Ser | Pro | Glu | Gly | Ala | Arg | Met | Thr | Thr | Val |
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| Gln | Thr | Ile | Thr | Gly | Ser | Asp | Pro | Glu | Glu | Ala | Ile | Phe | Asp | Thr | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Cys | Thr | Asp | Asp | Ser | Ser | Glu | Glu | Ala | Lys | Thr | Leu | Thr | Met | Asp | Ile |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Leu | Thr | Leu | Ala | His | Thr | Ser | Thr | Glu | Ala | Lys | Gly | Leu | Ser | Ser | Glu |
| 65  |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     | 80  |     |
| Ser | Ser | Ala | Ser | Ser | Asp | Gly | Pro | His | Pro | Val | Ile | Thr | Pro | Ser | Arg |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Ala | Ser | Glu | Ser | Ser | Ala | Ser | Ser | Asp | Gly | Pro | His | Pro | Val | Ile | Thr |
|     |     | 100 |     |     |     |     | 105 |     |     |     |     |     | 110 |     |     |
| Pro | Ser | Arg | Ala | Ser | Glu | Ser | Ser | Ala | Ser | Ser | Asp | Gly | Pro | His | Pro |
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| Val | Ile | Thr | Pro | Ser | Trp | Ser | Pro | Gly | Ser | Asp | Val | Thr | Leu | Leu | Ala |
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| Glu | Ala | Leu | Val | Thr | Val | Thr | Asn | Ile | Glu | Val | Ile | Asn | Cys | Ser | Ile |
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|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Lys | Pro | Asp | Arg | Asp | Thr | Leu | Asp | Glu | Tyr | Phe | Glu | Tyr | Asp | Ala |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Glu | Glu | Phe | Leu | Val | Ser | Leu | Ala | Leu | Leu | Ile | Thr | Glu | Gly | Arg | Thr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Pro | Glu | Cys | Ser | Val | Lys | Gly | Arg | Thr | Glu | Ser | Phe | His | Cys | Pro | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ala | Gln | Ser | Cys | Tyr | Pro | Val | Thr | Thr | Lys | His | Glu | Cys | Ser | Asp | Lys |

50                      55                      60  
 Leu Ala Gln Cys Arg Gln Ala Arg Arg Thr Arg Ser Glu Val Thr Leu  
 65                      70                      75                      80  
 Leu Trp Lys Asn Asn Leu Pro Ile Met Val Glu Met Met Leu Leu Pro  
                     85                      90                      95  
 Asp Cys Cys Tyr Ser Asp Asp Gly Pro Thr Thr Glu Gly Ile Asp Leu  
                     100                      105                      110  
 Asn Asp Pro Ala Ile Lys Gln Asp Ala Leu Leu Leu Glu Arg Trp Ile  
                     115                      120                      125  
 Leu Glu Pro Val Pro Arg Gln Asn Gly Asp Arg Phe Ile Glu Glu Lys  
                     130                      135                      140  
 Thr Leu Leu Leu Ala Val Arg Ser Phe Val Phe Phe Ser Gln Leu Ser  
 145                      150                      155                      160  
 Ala Trp Leu Ser Val Ser His Gly Ala Ile Pro Arg Asn Ile Leu Tyr  
                     165                      170                      175  
 Arg Ile Ser Ala Ala Asp Val Asp Leu Gln Trp Asn Phe Ser Gln Thr  
                     180                      185                      190  
 Pro Ile Glu His Val Phe Pro Val Pro Asn Val Ser His Asn Val Ala  
                     195                      200                      205  
 Leu Lys Val Ser Gly Gln Ser Leu Ala Gln Thr Ile  
                     210                      215                      220

&lt;210&gt; 2859

&lt;211&gt; 1029

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2859

ntgcagaagg aaattgcact cgtctcctcc gcgcccccg gacccaacac aatgcaccag  
 60  
 ccgcctgagt ccaccgccgc ggccgccgcc gctgcagaca ttagcgctag gaagatggcg  
 120  
 caccggcga tgttcctcg aaggggcagc ggtagtggca gcgcctctgc tctcaatgca  
 180  
 gcaggtaccg gcgtcggtag taatgccaca tcttcgagg attttcgcc tccgtcgctg  
 240  
 cttcagccgc cgcctctgc agcatcttct acgtcgggac cacagcctcc gcctccacaa  
 300  
 agcctgaacc tcctttcgca ggctcagctg caggcacagc ctcttgccg aggcggaact  
 360  
 caaatgaaaa agaaaagtgg cttccagata actagcgta ctctgctca gatctccgct  
 420  
 agtatcagct ctaacaacag tatagcagag gacactgaga gctatgatga tctggatgaa  
 480  
 tctcacacgg aagatctctc ttcttcggag atccttgatg tgtcactttc cagggctact  
 540  
 gacttagggg agcccgaacg cagctcctca gaagagaccc taaataactt ccaggaagcc  
 600  
 gagacacctg gggcagtctc tccaaccag cccaccttc ctcagcctca ttgcctcac  
 660  
 ctccacaac agaattgtgt gatcaatggg aatgctcatc cacaccacct ccatcaccac  
 720  
 catcagattc atcatgggca ccacctcaa catggtcacc accatccatc tcatgttgct  
 780



gtggccagtg catccattac tgggtgggcca ccctcaagcc cagtatctag aaaactctct  
 840  
 acaactggaa gctctgacag tatcacacca gttgcaccaa cttctgctgt atcatccagt  
 900  
 ggttcacctg catctgtaat gactaatatg cgtgctccaa gtactacagg tggaataggt  
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 1020  
 ttttaattcc  
 1029

<210> 2860

<211> 343

<212> PRT

<213> Homo sapiens

<400> 2860

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Gln | Lys | Glu | Ile | Ala | Leu | Val | Ser | Ser | Ala | Pro | Pro | Gly | Pro | Asn |
| 1   |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Thr | Met | His | Gln | Pro | Pro | Glu | Ser | Thr | Ala | Ala | Ala | Ala | Ala | Ala | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Asp | Ile | Ser | Ala | Arg | Lys | Met | Ala | His | Pro | Ala | Met | Phe | Pro | Arg | Arg |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Gly | Ser | Gly | Ser | Gly | Ser | Ala | Ser | Ala | Leu | Asn | Ala | Ala | Gly | Thr | Gly |
|     |     |     | 50  |     |     |     | 55  |     |     |     | 60  |     |     |     |     |
| Val | Gly | Ser | Asn | Ala | Thr | Ser | Ser | Glu | Asp | Phe | Pro | Pro | Pro | Ser | Leu |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |
| Leu | Gln | Pro | Pro | Pro | Pro | Ala | Ala | Ser | Ser | Thr | Ser | Gly | Pro | Gln | Pro |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Pro | Pro | Pro | Gln | Ser | Leu | Asn | Leu | Leu | Ser | Gln | Ala | Gln | Leu | Gln | Ala |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Gln | Pro | Leu | Ala | Pro | Gly | Gly | Thr | Gln | Met | Lys | Lys | Lys | Ser | Gly | Phe |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Gln | Ile | Thr | Ser | Val | Thr | Pro | Ala | Gln | Ile | Ser | Ala | Ser | Ile | Ser | Ser |
|     |     |     | 130 |     |     |     | 135 |     |     |     | 140 |     |     |     |     |
| Asn | Asn | Ser | Ile | Ala | Glu | Asp | Thr | Glu | Ser | Tyr | Asp | Asp | Leu | Asp | Glu |
| 145 |     |     |     |     | 150 |     |     |     | 155 |     |     |     |     | 160 |     |
| Ser | His | Thr | Glu | Asp | Leu | Ser | Ser | Ser | Glu | Ile | Leu | Asp | Val | Ser | Leu |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Ser | Arg | Ala | Thr | Asp | Leu | Gly | Glu | Pro | Glu | Arg | Ser | Ser | Ser | Glu | Glu |
|     |     |     | 180 |     |     |     | 185 |     |     |     |     |     | 190 |     |     |
| Thr | Leu | Asn | Asn | Phe | Gln | Glu | Ala | Glu | Thr | Pro | Gly | Ala | Val | Ser | Pro |
|     |     |     | 195 |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Asn | Gln | Pro | His | Leu | Pro | Gln | Pro | His | Leu | Pro | His | Leu | Pro | Gln | Gln |
|     |     |     | 210 |     |     |     | 215 |     |     |     |     | 220 |     |     |     |
| Asn | Val | Val | Ile | Asn | Gly | Asn | Ala | His | Pro | His | His | Leu | His | His | His |
| 225 |     |     |     |     | 230 |     |     |     | 235 |     |     |     |     | 240 |     |
| His | Gln | Ile | His | His | Gly | His | His | Leu | Gln | His | Gly | His | His | His | Pro |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Ser | His | Val | Ala | Val | Ala | Ser | Ala | Ser | Ile | Thr | Gly | Gly | Pro | Pro | Ser |
|     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |     |     |
| Ser | Pro | Val | Ser | Arg | Lys | Leu | Ser | Thr | Thr | Gly | Ser | Ser | Asp | Ser | Ile |
|     |     |     | 275 |     |     |     | 280 |     |     |     |     | 285 |     |     |     |
| Thr | Pro | Val | Ala | Pro | Thr | Ser | Ala | Val | Ser | Ser | Ser | Gly | Ser | Pro | Ala |

|   |     |     |     |     |
|---|-----|-----|-----|-----|
| 290   |     | 295 |     | 300 |
| Ser Val Met Thr Asn Met Arg Ala Pro Ser Thr Thr Gly Gly Ile Gly |     |     |     |     |
| 305   |     | 310 |     | 315 |
| Ile Asn Ser Val Thr Gly Thr Ser Thr Val Asn Asn Val Asn Ile Thr |     |     |     |     |
|   | 325 |     | 330 | 335 |
| Ala Val Gly Ser Phe Asn Ser                                     |     |     |     |     |
| 340   |     |     |     |     |

<210> 2861  
 <211> 756  
 <212> DNA  
 <213> Homo sapiens

<400> 2861  
 gctagctcta gctctgcacc agcccaagaa accatctgcc tcgacgactc actagatgaa  
 60  
 gacctttctt tccattcacc ttacttggat cttgtttctg aagctttagc gggtatcaac  
 120  
 aatgggaaca agggccctcc agttggctca aggataagca tgccaaccac aaagcctcgt  
 180  
 ccaggactga gagaagaaaa attagcaagt atcatgagta agctgccact agctactccc  
 240  
 aaaaaactag attctactca gactacacat tcttcaagtc ttattgctgg tcacacaggg  
 300  
 ccagtaccaa agaaacccca ggatttagct catactggca tctcttcagg ccttattgct  
 360  
 ggttcttcca ttcagaacct taaagtttct ttagaacctt tgccagccag gctacttcaa  
 420  
 caaggacttc agaggtaag ccagattcac acttcttctt cttcacagac ccattgtctcc  
 480  
 tcttcttccc aagcccaaat tgctgctctt tctcatgctc tgggaacatc cgaggcccaa  
 540  
 gatgcttctt cgtaacaca agtaacaaag gtgcaccagc attcagctgt ccagcagaac  
 600  
 tatgtgtctc cattacaggc caccatcagt aaatcccaga ccaaccccggt cgtgaagtta  
 660  
 agtaataatc cccaactctc ctgttctctc tcacttatta agacttcaga taagccactt  
 720  
 atgtaccgcc ttcccttate taccctcttc acgcgt  
 756

<210> 2862  
 <211> 252  
 <212> PRT  
 <213> Homo sapiens

<400> 2862  
 Ala Ser Ser Ser Ser Ala Pro Ala Gln Glu Thr Ile Cys Leu Asp Asp  
 1 5 10 15  
 Ser Leu Asp Glu Asp Leu Ser Phe His Ser Pro Ser Leu Asp Leu Val  
 20 25 30  
 Ser Glu Ala Leu Ala Val Ile Asn Asn Gly Asn Lys Gly Pro Pro Val  
 35 40 45  
 Gly Ser Arg Ile Ser Met Pro Thr Thr Lys Pro Arg Pro Gly Leu Arg

|   |     |     |     |     |
|---|-----|-----|-----|-----|
| 50  |     | 55  |     | 60  |
| Glu Glu Lys Leu Ala Ser Ile Met Ser Lys Leu Pro Leu Ala Thr Pro |     |     |     |     |
| 65  |     | 70  |     | 80  |
| Lys Lys Leu Asp Ser Thr Gln Thr Thr His Ser Ser Ser Leu Ile Ala |     |     |     |     |
|   | 85  |     | 90  | 95  |
| Gly His Thr Gly Pro Val Pro Lys Lys Pro Gln Asp Leu Ala His Thr |     |     |     |     |
|   | 100 |     | 105 | 110 |
| Gly Ile Ser Ser Gly Leu Ile Ala Gly Ser Ser Ile Gln Asn Pro Lys |     |     |     |     |
|   | 115 |     | 120 | 125 |
| Val Ser Leu Glu Pro Leu Pro Ala Arg Leu Leu Gln Gln Gly Leu Gln |     |     |     |     |
|   | 130 |     | 135 | 140 |
| Arg Ser Ser Gln Ile His Thr Ser Ser Ser Ser Gln Thr His Val Ser |     |     |     |     |
| 145   |     | 150 |     | 160 |
| Ser Ser Ser Gln Ala Gln Ile Ala Ala Ser Ser His Ala Leu Gly Thr |     |     |     |     |
|   | 165 |     | 170 | 175 |
| Ser Glu Ala Gln Asp Ala Ser Ser Leu Thr Gln Val Thr Lys Val His |     |     |     |     |
|   | 180 |     | 185 | 190 |
| Gln His Ser Ala Val Gln Gln Asn Tyr Val Ser Pro Leu Gln Ala Thr |     |     |     |     |
|   | 195 |     | 200 | 205 |
| Ile Ser Lys Ser Gln Thr Asn Pro Val Val Lys Leu Ser Asn Asn Pro |     |     |     |     |
|   | 210 |     | 215 | 220 |
| Gln Leu Ser Cys Ser Ser Ser Leu Ile Lys Thr Ser Asp Lys Pro Leu |     |     |     |     |
| 225   |     | 230 |     | 240 |
| Met Tyr Arg Leu Pro Leu Ser Thr Pro Phe Thr Arg                 |     |     |     |     |
|   | 245 |     | 250 |     |

&lt;210&gt; 2863

&lt;211&gt; 711

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2863

naccgacgtc gaatatccat gcagcgcgct ccgggagctg cacgngctg cgtggaaaga  
 60  
 gcgcccagcg gtggcgctgt tgtcgcccc tcctcgctcg gaagaatcgt ttggtctcct  
 120  
 gccgtgcccgaatcccagt cagaagttcc agcctgccac tgttctctga tgccatgcc  
 180  
 gcaccaactc aactgttttt tcctctcatc cgtaactgtg aactgagcag gatctatggc  
 240  
 actgcatggt actgccacca caaacatctc tgttggtcct catcgtacat tcctcagagt  
 300  
 cgactgagat acacacctca tccagcatat gctacctttt gcaggccaaa ggagaactgg  
 360  
 tggcagtaca cccaaggaag gagatatgct tccacaccac agaaatttta cctcacacct  
 420  
 ccacaagtca atagcatcct taaagctaataa gaatacagtt tcaaagtgcc agaatttgac  
 480  
 ggcaaaaatg tcagttctat ccttggtatt gacagcaatc agctgcctgc aaatgcaccc  
 540  
 attgaggacc ggagaagtgc agcaacctgc ttgcagacca gagggatgct tttgggggtt  
 600  
 tttgatggcc atgcagggtg tgcttgttcc caggcagtca gtgaaagact cttttattat  
 660

attgctgtct ctttgttacc ccatgagact ttgctagaga ttgaaaatgc a  
711

<210> 2864

<211> 237

<212> PRT

<213> Homo sapiens

<400> 2864

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Arg | Arg | Arg | Ile | Ser | Met | Gln | Arg | Ala | Pro | Gly | Ala | Ala | Arg | Xaa |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Cys | Val | Glu | Arg | Ala | Pro | Ser | Gly | Gly | Val | Val | Val | Ala | Pro | Ser | Ser |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ser | Gly | Arg | Ile | Val | Trp | Ser | Pro | Ala | Val | Pro | Gly | Ile | Pro | Val | Arg |
|     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Ser | Ser | Ser | Leu | Pro | Leu | Phe | Ser | Asp | Ala | Met | Pro | Ala | Pro | Thr | Gln |
|     | 50  |     |     |     | 55  |     |     |     |     |     | 60  |     |     |     |     |
| Leu | Phe | Phe | Pro | Leu | Ile | Arg | Asn | Cys | Glu | Leu | Ser | Arg | Ile | Tyr | Gly |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Thr | Ala | Cys | Tyr | Cys | His | His | Lys | His | Leu | Cys | Cys | Ser | Ser | Ser | Tyr |
|     |     |     |     | 85  |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Ile | Pro | Gln | Ser | Arg | Leu | Arg | Tyr | Thr | Pro | His | Pro | Ala | Tyr | Ala | Thr |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Phe | Cys | Arg | Pro | Lys | Glu | Asn | Trp | Trp | Gln | Tyr | Thr | Gln | Gly | Arg | Arg |
|     | 115 |     |     |     |     | 120 |     |     |     |     |     | 125 |     |     |     |
| Tyr | Ala | Ser | Thr | Pro | Gln | Lys | Phe | Tyr | Leu | Thr | Pro | Pro | Gln | Val | Asn |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Ser | Ile | Leu | Lys | Ala | Asn | Glu | Tyr | Ser | Phe | Lys | Val | Pro | Glu | Phe | Asp |
| 145 |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     | 160 |     |
| Gly | Lys | Asn | Val | Ser | Ser | Ile | Leu | Gly | Phe | Asp | Ser | Asn | Gln | Leu | Pro |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Ala | Asn | Ala | Pro | Ile | Glu | Asp | Arg | Arg | Ser | Ala | Ala | Thr | Cys | Leu | Gln |
|     |     | 180 |     |     |     |     | 185 |     |     |     |     |     | 190 |     |     |
| Thr | Arg | Gly | Met | Leu | Leu | Gly | Val | Phe | Asp | Gly | His | Ala | Gly | Cys | Ala |
|     | 195 |     |     |     |     | 200 |     |     |     |     |     | 205 |     |     |     |
| Cys | Ser | Gln | Ala | Val | Ser | Glu | Arg | Leu | Phe | Tyr | Tyr | Ile | Ala | Val | Ser |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Leu | Leu | Pro | His | Glu | Thr | Leu | Leu | Glu | Ile | Glu | Asn | Ala |     |     |     |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     |     |

<210> 2865

<211> 585

<212> DNA

<213> Homo sapiens

<400> 2865

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agaagtagta gaagacaaag acagttcttt aaattcttga gaagtatgag ctctgtgtat  
120  
ctgcagtgtg aagttttgat atgtgatagc agtgaccacc agtctcgctg caatcaagggt  
180  
tgtgtctcca gaagcaaacg agacatttct tcatataaat ggaaaacaga ttccatcata  
240

ggacccattc gtctgaaaag ggatcgaagt gcaagtggca attcaggatt tcagcatgaa  
 300  
 acacatgcgg aagaaactcc aaaccagcct ttcaacagtg tgcattctgtt ttccttcagt  
 360  
 gttctagctc tgaatgtggt gactgtagcg acaatcacag tgaggcattt tgtaaataca  
 420  
 cgggcagact acaaatacca gaagctgcag aactattaac taacaggtcc aaccctaagt  
 480  
 gagacatggt tctccaggat gccaaaggaa atgctacctc gtggctacac atattatgaa  
 540  
 taaatgagga agggcctgaa agtggcacac aggcctgcaa aaaaa  
 585

<210> 2866  
 <211> 134  
 <212> PRT  
 <213> Homo sapiens

<400> 2866  
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 Ser Met Ser Ser Val Tyr Leu Gln Cys Lys Val Leu Ile Cys Asp Ser  
 20 25 30  
 Ser Asp His Gln Ser Arg Cys Asn Gln Gly Cys Val Ser Arg Ser Lys  
 35 40 45  
 Arg Asp Ile Ser Ser Tyr Lys Trp Lys Thr Asp Ser Ile Ile Gly Pro  
 50 55 60  
 Ile Arg Leu Lys Arg Asp Arg Ser Ala Ser Gly Asn Ser Gly Phe Gln  
 65 70 75 80  
 His Glu Thr His Ala Glu Glu Thr Pro Asn Gln Pro Phe Asn Ser Val  
 85 90 95  
 His Leu Phe Ser Phe Met Val Leu Ala Leu Asn Val Val Thr Val Ala  
 100 105 110  
 Thr Ile Thr Val Arg His Phe Val Asn Gln Arg Ala Asp Tyr Lys Tyr  
 115 120 125  
 Gln Lys Leu Gln Asn Tyr  
 130

<210> 2867  
 <211> 444  
 <212> DNA  
 <213> Homo sapiens

<400> 2867  
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 60  
 ctgtcggccg ccgccatcaa gaggatcgtg gctacagcta aggccagtgg gaagaagctg  
 120  
 cagaaggtga ctctgaaggt gtcgccacgg ggaattatcc ttcattcagg ccatcatcca  
 180  
 gctcccagac aacctgctg ccactcaagg cttgtggccg cggcacctcg tccatgttgg  
 240  
 tgggtgtggc gctgaccgtg gacagcgggg ccttagccgt ctctctaaag tccagcaggt  
 300

tcccagtggc gaccaagctc ttcaaggggg ggggtgcagtc ttggcggggcc cccaggacgt  
 360  
 cccctccctc ttggtgggt ttgtccctct tctctttctc ttccttggac acctgccaaa  
 420  
 actcaaaggc gactttgaag gcct  
 444

<210> 2868

<211> 84

<212> PRT

<213> Homo sapiens

<400> 2868

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Leu | Phe | Ser | Leu | Lys | Tyr | Leu | Gly | Met | Thr | Leu | Val | Glu | Gln | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Lys | Gly | Glu | Glu | Leu | Ser | Ala | Ala | Ala | Ile | Lys | Arg | Ile | Val | Ala | Thr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ala | Lys | Ala | Ser | Gly | Lys | Lys | Leu | Gln | Lys | Val | Thr | Leu | Lys | Val | Ser |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Pro | Arg | Gly | Ile | Ile | Leu | His | Pro | Gly | His | His | Pro | Ala | Pro | Arg | Gln |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| His | Cys | Cys | His | Ser | Arg | Leu | Val | Ala | Ala | Ala | Pro | Arg | Pro | Cys | Trp |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |
| Trp | Cys | Trp | Arg |     |     |     |     |     |     |     |     |     |     |     |     |

<210> 2869

<211> 5811

<212> DNA

<213> Homo sapiens

<400> 2869

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 cagcaatatg gaccaaacag ccagttcccc acccagccag gccagtaccc tacccecaac  
 120  
 cccccaaggc cactcacctc cccaactac ccaggacaaa ggatgcccag ccaaccagc  
 180  
 tccggacagt acccaccctc cacagtcaac atggggcagt attacaagcc agaacagttt  
 240  
 aatggacaaa ataacacgtt ctcggaagc agctacagta actacagcca agggaaatgtc  
 300  
 aacaggcctc ccaggccggt tcctgtggca aattaccccc actcacctgt tccagggaac  
 360  
 cccacacccc ccattgacccc tgggagcagc atccctccat acctgtcccc cagccaagac  
 420  
 gtcaaaccac ccttcccggc tgacatcaag ccaaatatga gcgctctgcc accaccccca  
 480  
 gccaaaccac atgacgagct gcggctcaca ttccctgtgc gggatggcgt ggtgctggag  
 540  
 cccttccggc tggagcacia cctggctgta agcaaccatg tgttccagct gcgagactca  
 600  
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<211> 258

<212> PRT

<213> Homo sapiens

<400> 2870

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| Glu | Phe | Glu | Glu | Val | Thr | Ile | Asp | Pro | Thr | Cys | Ser | Trp | Arg | Pro | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Pro | Ile | Lys | Ser | Asp | Leu | His | Ile | Lys | Asp | Asp | Pro | Asp | Gly | Ile | Pro |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ser | Lys | Arg | Phe | Lys | Thr | Met | Ser | Pro | Ser | Gln | Met | Ile | Met | Pro | Asn |
|     |     | 35  |     |     |     |     | 40  |     |     |     | 45  |     |     |     |     |
| Val | Met | Glu | Met | Ile | Ala | Ala | Leu | Gly | Pro | Gly | Pro | Ser | Pro | Tyr | Pro |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Leu | Pro | Pro | Pro | Pro | Gly | Gly | Thr | Asn | Ser | Asn | Asp | Tyr | Ser | Ser | Gln |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Gly | Asn | Asn | Tyr | Gln | Gly | His | Gly | Asn | Phe | Asp | Phe | Pro | His | Gly | Asn |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Pro | Gly | Gly | Thr | Ser | Met | Asn | Asp | Phe | Met | His | Gly | Pro | Pro | Gln | Leu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     |     | 110 |     |
| Ser | His | Pro | Pro | Asp | Met | Pro | Asn | Asn | Met | Ala | Ala | Leu | Glu | Lys | Pro |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Leu | Ser | His | Pro | Met | Gln | Glu | Thr | Met | Pro | His | Ala | Gly | Ser | Ser | Asp |
|     |     | 130 |     |     |     |     | 135 |     |     |     | 140 |     |     |     |     |
| Gln | Pro | His | Pro | Ser | Ile | Gln | Gln | Gly | Leu | His | Val | Pro | His | Pro | Ser |
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| Ser | Gln | Ser | Gly | Pro | Pro | Leu | His | His | Ser | Gly | Ala | Pro | Pro | Pro | Pro |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Pro | Ser | Gln | Pro | Pro | Arg | Gln | Pro | Pro | Gln | Ala | Ala | Pro | Ser | Ser | His |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Pro | His | Ser | Asp | Leu | Thr | Phe | Asn | Pro | Ser | Ser | Ala | Leu | Glu | Gly | Gln |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Ala | Gly | Ala | Gln | Gly | Ala | Ser | Asp | Met | Pro | Glu | Pro | Ser | Leu | Asp | Leu |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Leu | Pro | Glu | Leu | Thr | Asn | Pro | Asp | Glu | Leu | Leu | Ser | Tyr | Leu | Asp | Pro |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     | 240 |     |
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<211> 786

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2871

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&lt;210&gt; 2872

&lt;211&gt; 153

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2872

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<210> 2874  
 <211> 248  
 <212> PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2874

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      35           40           45
Met Val Ala Met Val Glu Val Gln Leu Asp Ala Asp His Asp Tyr Pro
      50           55           60
Pro Gly Leu Leu Ile Ala Phe Ser Ala Cys Thr Thr Val Leu Val Ala
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Gly His Leu Phe Ala Leu Met Ile Ser Thr Cys Ile Leu Pro Asn Ile
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Glu Ala Val Ser Asn Cys Thr Ile Ser Thr Arg Lys Glu Ser Pro His
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Glu Arg Met His Arg His Ile Glu Leu Ala Trp Ala Phe Ser Thr Val
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Lys Pro Pro Ala Ser Gly Ala Ala Ala Asn Val Ser Thr Ser Gly Ile
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&lt;211&gt; 593

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2875

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 <211> 1921  
 <212> DNA  
 <213> Homo sapiens

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| Thr | Glu | Glu | Gly | Lys | Glu | Val | Trp | Asp | Tyr | Val | Thr | Val | Arg | Lys | Asp |
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| Ala | Tyr | Met | Phe | Trp | Trp | Leu | Tyr | Tyr | Ala | Thr | Thr | Pro | Ala | Arg | Thr |
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| Leu | Lys | Pro | Arg | Lys | Thr | Thr | Trp | Leu | Gln | Ala | Ala | Ser | Leu | Leu | Phe |
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| Val | Asp | Asn | Pro | Val | Gly | Thr | Gly | Phe | Ser | Tyr | Val | Asn | Gly | Ser | Gly |
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| Leu | Lys | Thr | Phe | Phe | Ser | Cys | His | Lys | Glu | Phe | Gln | Thr | Val | Pro | Phe |
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| Tyr | Ile | Phe | Ser | Glu | Ser | Tyr | Gly | Gly | Lys | Met | Ala | Ala | Gly | Ile | Gly |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Leu | Glu | Leu | Tyr | Lys | Ala | Ile | Gln | Arg | Gly | Thr | Ile | Lys | Cys | Asn | Phe |
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| Ala | Gly | Val | Ala | Leu | Gly | Asp | Ser | Trp | Ile | Ser | Pro | Val | Asp | Ser | Val |
|     | 195 |     |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Leu | Ser | Trp | Gly | Pro | Tyr | Leu | Tyr | Ser | Met | Ser | Leu | Leu | Glu | Asp | Lys |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Gly | Leu | Ala | Glu | Val | Ser | Lys | Val | Ala | Glu | Gln | Val | Leu | Asn | Ala | Val |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     | 240 |     |
| Asn | Lys | Gly | Leu | Tyr | Arg | Glu | Ala | Thr | Glu | Leu | Trp | Gly | Lys | Ala | Glu |
|     |     |     | 245 |     |     |     |     |     | 250 |     |     |     | 255 |     |     |
| Met | Ile | Ile | Glu | Gln | Asn | Thr | Asp | Gly | Val | Asn | Phe | Tyr | Asn | Ile | Leu |
|     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |     |     |
| Thr | Lys | Ser | Thr | Pro | Thr | Ser | Thr | Met | Glu | Ser | Ser | Leu | Glu | Phe | Thr |
|     | 275 |     |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |
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| Glu | Gly | Leu | Thr | Val | Phe | Ser | Leu | Ala | Ser | Arg | Cys | Gln | Pro | Gly | Gly |
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| Asp | Trp | Tyr | Leu | Val | Thr | Gly | Ser | Ser | Leu | Thr | Cys | Thr | Pro | Gly | Pro |
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| Ala | Arg | Gly | Glu | Arg | Pro | Pro | Arg | Leu | Gly | Leu | Pro | Thr | Pro | Gly | Val |
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| Pro | Val | Xaa | Asp | Lys | Tyr | Ala | Pro | Lys | Leu | Asp | Ser | Pro | Tyr | Phe | Arg |
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| His | Ser | Ser | Val | Ser | Phe | Phe | Pro | Ser | Phe | Pro | Pro | Ala | Ile | Pro | Gly |
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| Ala | Phe | Gln | Pro | Lys | Thr | Ser | Ser | Pro | Ile | Glu | Val | Ala | Arg | Arg | Ala |
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| Gly | Ala | Val | His | Thr | Leu | Leu | Gln | Lys | Ala | Pro | Gly | Val | Ser | Asp | Pro |
| 145 |     |     |     |     | 150 |     |     |     | 155 |     |     |     |     | 160 |     |
| Tyr | Arg | Ala | Val | Val | Lys | Lys | Pro | Gly | Arg | Trp | Cys | Ala | Val | His | Val |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Gln | Ile | Ala | Trp | Gln | Ile | Tyr | Arg | His | Gln | Gln | Lys | Ile | Lys | Glu | Met |
|     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |     |
| Gln | Leu | Asp | Pro | His | Lys | Leu | Glu | Val | Gly | Ala | Lys | Leu | Asp | Leu | Phe |
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| Gly | Arg | Pro | Pro | Ala | Pro | Gly | Val | Phe | Ala | Gly | Phe | His | Tyr | Pro | Gln |
|     | 210 |     |     |     | 215 |     |     |     |     |     |     | 220 |     |     |     |
| Asp | Leu | Ala | Arg | Pro | Leu | Phe | Pro | Ser | Thr | Gly | Ala | Ala | His | Pro | Ala |
| 225 |     |     |     | 230 |     |     |     |     | 235 |     |     |     | 240 |     |     |
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|     | 245 |     | 250 |     | 255 |     |     |     |     |     |     |     |     |     |     |
| Gly | Pro | Leu | Thr | Asp | Pro | Phe | Ser | Arg | Pro | Ser | Thr | Phe | Gly | Gly | Leu |
|     | 260 |     | 265 |     | 270 |     |     |     |     |     |     |     |     |     |     |
| Gly | Ser | Leu | Ser | Ser | His | Ala | Phe | Gly | Gly | Leu | Gly | Ser | His | Ala | Leu |
|     | 275 |     | 280 |     | 285 |     |     |     |     |     |     |     |     |     |     |
| Ala | Pro | Gly | Gly | Ser | Ile | Phe | Ala | Pro | Lys | Glu | Gly | Ser | Ser | Val | Leu |
|     | 290 |     | 295 |     | 300 |     |     |     |     |     |     |     |     |     |     |
| Gly | Leu | Pro | Ser | Pro | His | Glu | Ala | Trp | Ser | Arg | Leu | His | Arg | Ala | Pro |
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| Pro | Ser | Phe | Pro | Ala | Pro | Pro | Pro | Trp | Pro | Lys | Ser | Val | Asp | Ala | Glu |
|     | 325 |     | 330 |     | 335 |     |     |     |     |     |     |     |     |     |     |
| Arg | Val | Ser | Ala | Leu | Thr | Asn | His | Asp | Arg | Glu | Pro | Val | Asn | Gly | Lys |
|     | 340 |     | 345 |     | 350 |     |     |     |     |     |     |     |     |     |     |
| Glu | Glu | Gln | Glu | Arg | Asp | Leu | Leu | Glu | Lys | Thr | Arg | Leu | Leu | Ser | Arg |
|     | 355 |     | 360 |     | 365 |     |     |     |     |     |     |     |     |     |     |
| Ala | Ser | Pro | Ala | Thr | Pro | Ala | Gly |     |     |     |     |     |     |     |     |
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| Arg | Val | Lys | Lys | Ala | Ser | Glu | Gly | Gly | Phe | Cys | Ser | Leu | Arg | Leu | Trp |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |     |
| Val | His | Pro | Gln | His | Phe | Leu | Arg | Lys | Arg | Thr | Pro | Ala | Gln | Ala | Gly |
|     | 35  |     |     |     |     | 40  |     |     |     | 45  |     |     |     |     |     |
| Pro | Ala | Ile | Ser | Pro | Leu | Pro | Thr | Asp | Ser | Gln | Ser | Pro | Leu | Ala | Ser |
|     | 50  |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |     |
| Pro | Leu | Asp | Val | Ser | Gly | Gln | Gly | Ser | Gly | Gly | Cys | Ser | Phe | Asp | Lys |
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| Lys | Lys | Lys | Lys | Phe | Tyr | Val | Phe | Lys | Leu | Leu | Leu | Gln | Asp | Phe | Asn |
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<400> 2883

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 300

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<210> 2884

<211> 172

<212> PRT

<213> Homo sapiens

<400> 2884

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Lys | Glu | Asp | Arg | Gly | Glu | Tyr | Ser | Pro | Ala | Leu | Ala | Leu | Pro | Ser |
| 1   |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Leu | Arg | Gly | Cys | Tyr | His | Glu | Gly | Pro | Ala | Gly | Gly | Ala | Ala | Ala | Ala |
|     | 20  |     |     |     |     |     | 25  |     |     |     | 30  |     |     |     |     |
| Pro | Ser | Ser | Val | Asp | Thr | Tyr | Pro | Tyr | Gly | Leu | Pro | Thr | Pro | Pro | Glu |
|     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Met | Ser | Pro | Leu | Asp | Val | Leu | Glu | Pro | Glu | Gln | Thr | Phe | Phe | Ser | Ser |
| 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |
| Pro | Cys | Gln | Glu | Glu | His | Gly | His | Pro | Arg | Arg | Ile | Pro | His | Leu | Pro |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |
| Gly | His | Pro | Tyr | Ser | Pro | Glu | Tyr | Ala | Pro | Ser | Pro | Leu | His | Cys | Ser |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| His | Pro | Leu | Gly | Ser | Leu | Ala | Leu | Gly | Gln | Ser | Pro | Gly | Val | Ser | Met |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Met | Ser | Pro | Val | Pro | Gly | Cys | Pro | Pro | Ser | Pro | Ala | Tyr | Tyr | Ser | Pro |
|     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |     |
| Ala | Thr | Tyr | His | Pro | Leu | His | Ser | Asn | Leu | Gln | Ala | His | Leu | Gly | Gln |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Leu | Ser | Pro | Pro | Pro | Glu | His | Pro | Gly | Phe | Asp | Ala | Leu | Asp | Gln | Leu |
| 145 |     |     |     |     | 150 |     |     |     | 155 |     |     |     |     | 160 |     |
| Asn | Gln | Gly | Glu | Leu | Leu | Gly | Asp | Met | Asp | Arg | Asn |     |     |     |     |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     |     |     |     |

<210> 2885

<211> 807

<212> DNA

<213> Homo sapiens

<400> 2885

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 120  
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 240  
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 300

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 807

&lt;210&gt; 2886

&lt;211&gt; 269

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2886

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Leu | Gln | Gly | Ile | Gly | His | Phe | Xaa | Asn | Thr | Ile | Arg | Glu | Met | Phe |
| 1   |     |     | 5   |     |     |     |     |     | 10  |     |     |     | 15  |     |     |
| Ser | Gln | Phe | Ala | Glu | Phe | Asp | Asp | Glu | Leu | Asp | Ser | Met | Ala | Pro | Val |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gly | Arg | Asp | Ala | Glu | Thr | Leu | Gln | Lys | Gln | Lys | Glu | Thr | Ile | Lys | Ala |
|     |     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |
| Phe | Leu | Lys | Lys | Leu | Glu | Ala | Leu | Ile | Ala | Ser | Asn | Asp | Asn | Ala | Asn |
|     |     |     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |
| Lys | Thr | Cys | Lys | Met | Met | Leu | Ala | Thr | Glu | Glu | Thr | Ser | Pro | Asp | Leu |
| 65  |     |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |
| Val | Gly | Ile | Lys | Arg | Asp | Leu | Glu | Ala | Leu | Ser | Lys | Gln | Cys | Asn | Lys |
|     |     |     |     |     |     | 85  |     |     |     |     | 90  |     |     |     | 95  |
| Leu | Leu | Asp | Arg | Ala | Gln | Ala | Arg | Glu | Glu | Gln | Val | Glu | Gly | Thr | Ile |
|     |     |     |     |     |     | 100 |     |     |     |     | 105 |     |     |     | 110 |
| Lys | Arg | Leu | Glu | Glu | Phe | Tyr | Ser | Lys | Leu | Lys | Glu | Phe | Ser | Ile | Leu |
|     |     |     |     |     |     | 115 |     |     |     |     | 120 |     |     |     | 125 |
| Leu | Gln | Lys | Ala | Glu | Glu | His | Glu | Glu | Ser | Gln | Gly | Pro | Val | Gly | Met |
|     |     |     |     |     |     | 130 |     |     |     |     | 135 |     |     |     | 140 |
| Glu | Thr | Glu | Thr | Ile | Asn | Gln | Gln | Leu | Asn | Met | Phe | Lys | Val | Phe | Gln |
| 145 |     |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |
| Lys | Glu | Glu | Ile | Glu | Pro | Leu | Gln | Gly | Lys | Gln | Gln | Asp | Val | Asn | Trp |
|     |     |     |     |     |     | 165 |     |     |     |     | 170 |     |     |     | 175 |
| Leu | Gly | Gln | Gly | Leu | Ile | Gln | Ser | Ala | Ala | Lys | Ser | Thr | Ser | Thr | Gln |
|     |     |     |     |     |     | 180 |     |     |     |     | 185 |     |     |     | 190 |
| Gly | Leu | Glu | His | Asp | Leu | Asp | Asp | Val | Asn | Ala | Arg | Trp | Lys | Thr | Leu |
|     |     |     |     |     |     | 195 |     |     |     |     | 200 |     |     |     | 205 |
| Asn | Lys | Lys | Val | Ala | Gln | Arg | Ala | Ala | Gln | Leu | Gln | Glu | Ala | Leu | Leu |
|     |     |     |     |     |     | 210 |     |     |     |     | 215 |     |     |     | 220 |
| His | Cys | Gly | Arg | Phe | Gln | Asp | Ala | Leu | Glu | Ser | Leu | Leu | Ser | Trp | Met |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 225 |     | 230 |     | 235 |     | 240 |     |     |     |     |     |     |     |     |     |
| Val | Asp | Thr | Glu | Glu | Leu | Val | Ala | Asn | Gln | Lys | Pro | Pro | Ser | Ala | Glu |
|     |     |     | 245 |     |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Phe | Lys | Val | Val | Lys | Asp | Lys | Ile | Gln | Glu | Gln | Lys | Leu |     |     |     |
|     |     |     | 260 |     |     |     |     | 265 |     |     |     |     |     |     |     |

&lt;210&gt; 2887

&lt;211&gt; 1945

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2887

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1260

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 1920  
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 1945

<210> 2888

<211> 315

<212> PRT

<213> Homo sapiens

<400> 2888

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| Met | Met | Lys | Pro | Ser | Trp | Leu | Ser | Arg | Thr | Glu | Phe | Ser | Lys | Arg | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Leu | Cys | Arg | Thr | Leu | Trp | Cys | Gln | Ser | Gly | Trp | Ser | Ser | Arg | Ser | Tyr |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Thr | Arg | Ser | Met | Leu | Lys | Met | Thr | Ser | Ile | Asn | Arg | Arg | Ser | Arg |     |
|     |     |     | 35  |     |     |     | 40  |     |     |     | 45  |     |     |     |     |
| Thr | Ser | Thr | Lys | Ser | Thr | Arg | Thr | Ser | Ala | Arg | Pro | Gly | Leu | Thr | Ala |
|     |     |     | 50  |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Thr | Val | Ser | Ile | Gly | Leu | Ser | Asp | Ser | Pro | Thr | Trp | Arg | His | Cys | Trp |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Met | Thr | Ala | Arg | Ser | Cys | Ser | Gly | Glu | Lys | Gly | Gly | His | Trp | Ala | Pro |
|     |     |     | 85  |     |     |     | 90  |     |     |     |     |     | 95  |     |     |
| Arg | Gln | Val | Gly | Val | Tyr | Leu | Leu | Pro | Gly | Arg | Val | Gly | Cys | Val | Ser |
|     |     |     | 100 |     |     |     | 105 |     |     |     |     |     | 110 |     |     |
| Ser | Arg | Val | Ser | Pro | Ser | Phe | Pro | Gly | Asp | Gly | Leu | Asp | Ser | Gly | Leu |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Ala | Arg | Arg | Gly | Ser | Ala | Val | Ser | Ala | Leu | Ala | Ser | Gly | Leu | Val | Glu |
|     |     |     | 130 |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Glu | Pro | Met | Leu | Gly | Pro | Pro | Phe | His | Pro | Thr | Pro | Arg | Phe | Lys | Ala |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Val | Ser | Ala | Lys | Ser | Lys | Glu | Asp | Leu | Val | Ser | Gln | Gly | Phe | Thr | Glu |
|     |     |     | 165 |     |     |     | 170 |     |     |     |     |     | 175 |     |     |
| Phe | Thr | Ile | Glu | Asp | Phe | His | Asn | Thr | Phe | Met | Asp | Leu | Ile | Glu | Gln |

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<212> DNA
<213> Homo sapiens
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<210> 2890
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2123

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35           40           45
Lys Ala Glu Gln Ala Glu Gly Met Glu Phe Gly Phe Lys Met Pro Lys
50           55           60
Met Thr Met Pro Lys Leu Gly Arg Ala Glu Ser Pro Ser Arg Gly Lys
65           70           75           80
Pro Gly Glu Ala Gly Ala Glu Val Ser Gly Lys Leu Val Thr Leu Pro
85           90           95
Cys Leu Gln Pro Glu Val Asp Gly Glu Ala His Val Gly Val Pro Ser
100          105          110
Leu Thr Leu Pro Ser Val Glu Leu Asp Leu Pro Gly Ala Leu Gly Leu
115          120          125
Gln Gly Gln Val Pro Ala Ala Lys Met Gly Lys Gly Glu Arg Ala Glu
130          135          140
Gly Pro Glu Val Ala Ala Gly Val Arg Glu Val Gly Phe Arg Val Pro
145          150          155          160
Ser Val Glu Ile Val Thr Pro Gln Leu Pro Ala Val Glu Ile Glu Glu
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Gly Arg Leu Glu Met Ile Glu Thr Lys Val Lys Pro Ser Ser Lys Phe
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<210> 2891  
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 <212> DNA  
 <213> Homo sapiens

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<210> 2892

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 <212> PRT  
 <213> Homo sapiens

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 Ser Thr Ser Tyr Arg Lys Ala Leu Pro Ile Leu Arg Pro Ser Ser Arg  
 35 40 45  
 Arg Glu Ala Gly Pro Leu His His Ile Asp Leu Arg Arg Cys Phe Ser  
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<210> 2893  
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 180  
 gtagggagca ccctacaggc atgacttggc agctaggcca tgtttatttc ccttgggtggg  
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&lt;210&gt; 2894

&lt;211&gt; 490

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2894

Met Phe Ile Ser Leu Gly Gly Ala Pro Asp Arg Gln Ser Leu Phe Pro

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| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     | 15  |     |     |     |
| Gln | Leu | Gly | Gly | Gly | Ser | Gly | Gly | Gly | Ser | Ala | Arg | Gly | Tyr | Cys | Arg |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gln | Val | Ser | Val | Ser | Leu | His | Pro | Gly | Thr | Gly | Leu | Phe | Ser | Pro | Phe |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Cys | Ser | Val | Pro | Leu | Trp | Cys | Ile | Tyr | Phe | Leu | Ser | Phe | Cys | Ile | Val |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Leu | Ser | Leu | Pro | Ser | Ala | Ser | Leu | His | Leu | Cys | Leu | Ser | Cys | Leu | His |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Phe | Leu | Asn | Leu | Asp | Cys | Pro | Cys | Leu | Phe | Leu | Cys | His | Ser | Leu | Ser |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ser | Pro | Ser | Val | Cys | Gly | Ser | Ala | Ser | Leu | Ser | His | Ser | Pro | Tyr | Asn |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     |     | 110 |     |
| Trp | Pro | Leu | Pro | Ala | Gln | Thr | Phe | Leu | Asp | Glu | Leu | His | Glu | Thr | Gly |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Gln | Leu | His | Ser | Met | Ser | Thr | Trp | Met | Glu | Leu | Tyr | Pro | Ala | Val | Ser |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Thr | Asp | Val | Arg | Phe | Ala | Asn | Met | Leu | Gly | Gln | Pro | Gly | Ser | Thr | Pro |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Leu | Asp | Leu | Phe | Lys | Phe | Tyr | Val | Glu | Glu | Leu | Lys | Ala | Arg | Phe | His |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Asp | Glu | Lys | Lys | Ile | Ile | Lys | Asp | Ile | Leu | Lys | Asp | Arg | Gly | Phe | Cys |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Val | Glu | Val | Asn | Thr | Ala | Phe | Glu | Asp | Phe | Ala | His | Val | Ile | Ser | Phe |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Asp | Lys | Arg | Ala | Ala | Ala | Leu | Asp | Ala | Gly | Asn | Ile | Lys | Leu | Thr | Phe |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Asn | Ser | Leu | Leu | Glu | Lys | Ala | Glu | Ala | Arg | Glu | Arg | Glu | Arg | Glu | Lys |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |
| Glu | Glu | Ala | Arg | Arg | Met | Arg | Arg | Arg | Glu | Ala | Ala | Phe | Arg | Ser | Met |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Leu | Arg | Gln | Ala | Val | Pro | Ala | Leu | Glu | Leu | Gly | Thr | Ala | Trp | Glu | Glu |
|     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |     |     |
| Val | Arg | Glu | Arg | Phe | Val | Cys | Asp | Ser | Ala | Phe | Glu | Gln | Ile | Thr | Leu |
|     |     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |
| Glu | Ser | Glu | Arg | Ile | Arg | Leu | Phe | Arg | Glu | Phe | Leu | Gln | Val | Leu | Glu |
|     | 290 |     |     |     |     | 295 |     |     |     |     | 300 |     |     |     |     |
| Thr | Glu | Cys | Gln | His | Leu | His | Thr | Lys | Gly | Arg | Lys | His | Gly | Arg | Lys |
| 305 |     |     |     |     | 310 |     |     |     |     | 315 |     |     |     |     | 320 |
| Gly | Lys | Lys | His | His | His | Lys | Arg | Ser | His | Ser | Pro | Ser | Gly | Ser | Glu |
|     |     |     | 325 |     |     |     |     |     | 330 |     |     |     |     | 335 |     |
| Ser | Glu | Glu | Glu | Glu | Leu | Pro | Pro | Pro | Ser | Leu | Arg | Pro | Pro | Lys | Arg |
|     |     |     | 340 |     |     |     |     | 345 |     |     |     |     | 350 |     |     |
| Arg | Arg | Arg | Asn | Pro | Ser | Glu | Ser | Gly | Ser | Glu | Pro | Ser | Ser | Ser | Leu |
|     |     | 355 |     |     |     |     |     | 360 |     |     |     | 365 |     |     |     |
| Asp | Ser | Val | Glu | Ser | Gly | Gly | Ala | Ala | Leu | Gly | Gly | Arg | Gly | Ser | Pro |
|     | 370 |     |     |     |     | 375 |     |     |     |     | 380 |     |     |     |     |
| Ser | Ser | His | Leu | Leu | Gly | Ala | Asp | His | Gly | Leu | Arg | Lys | Ala | Lys | Lys |
| 385 |     |     |     |     | 390 |     |     |     |     | 395 |     |     |     |     | 400 |
| Pro | Lys | Lys | Lys | Thr | Lys | Lys | Arg | Arg | His | Lys | Ser | Asn | Ser | Pro | Glu |
|     |     |     |     | 405 |     |     |     |     | 410 |     |     |     |     | 415 |     |
| Ser | Glu | Thr | Asp | Pro | Glu | Glu | Lys | Ala | Gly | Lys | Glu | Ser | Asp | Glu | Lys |
|     |     |     | 420 |     |     |     |     | 425 |     |     |     |     | 430 |     |     |
| Glu | Gln | Glu | Gln | Asp | Lys | Asp | Arg | Glu | Leu | Gln | Gln | Ala | Glu | Leu | Pro |

|     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|
|     | 435 |     | 440 |     | 445 |     |
| Asn | Arg | Ser | Pro | Gly | Phe | Gly |
|     | 450 |     | 455 |     | 460 |     |
| Thr | Ser | Glu | Ser | Glu | Leu | Ser |
| 465 |     |     | 470 |     | 475 |     |
| Thr | Leu | Leu | Gln | Gln | Leu | Asp |
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 35 40 45  
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 50 55 60  
 Gln Glu Leu Ala Gln Asp Ala Val Ala Pro Ala Val Ala Arg Arg Ser

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |
| Ala | Pro | Ala | Pro | Cys | Ser | Asn | Arg | Leu | Arg | Ser | Pro | Ser | Pro | Pro |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     | 95  |     |
| Leu | Pro | Pro | Asp | Arg | Pro | Arg | Pro | Pro | Ala | Arg | Arg | His | Ser | Phe |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |
| Gly | Pro | Ala | Leu | Arg | Ser | Gly | Pro | Pro | Leu | Pro | Pro | Pro | Pro | Arg |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |
| Pro | Leu | Leu | Arg | Pro | Pro | Val | Ala | Ala | Ala | Leu | Pro | Pro | Gln | Pro |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |
| Pro | Ser | Leu | Pro | Ala | Ser | Arg | Ala | His | Ser | Cys | Pro | Gly | Arg | Pro |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |
| Leu | Gly | Gly | Val | Glu | Gln | Pro | Leu | Glu | Val | Leu | Gly | Asp | Ala |     |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     |     |

&lt;210&gt; 2897

&lt;211&gt; 3184

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2897

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1020

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<211> 933

<212> PRT

<213> Homo sapiens

<400> 2898

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| Met | Asn | Val | Glu | Ile | Lys | Cys | Lys | Asp | Arg | Thr | Gly | Ser | Ile | Thr | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Leu | Thr | Pro | Asn | Gln | Thr | Asn | Ile | Ile | Asn | Phe | Tyr | Glu | Val | Glu | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     | 30  |     |     |     |
| Asn | Glu | Cys | Val | Gln | Cys | Glu | Phe | Asn | Phe | Ile | Asn | Thr | Gly | Lys | Phe |
|     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Thr | Phe | Ser | Phe | Gln | Ala | Gln | Leu | Cys | Gly | Ser | Lys | Thr | Leu | Leu | Gln |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Tyr | Leu | Glu | Phe | Ser | Pro | Ile | Asp | Ser | Thr | Val | Asp | Val | Gly | Gln | Ser |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Val | His | Ala | Thr | Leu | Ser | Phe | Gln | Pro | Leu | Lys | Lys | Cys | Val | Leu | Thr |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Asp | Leu | Glu | Leu | Ile | Ile | Lys | Ile | Ser | His | Gly | Pro | Thr | Phe | Met | Cys |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Asn | Ile | Ser | Gly | Cys | Ala | Val | Ser | Pro | Ala | Ile | His | Phe | Ser | Phe | Thr |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Ser | Tyr | Asn | Phe | Gly | Thr | Cys | Phe | Ile | Tyr | Gln | Ala | Gly | Met | Pro | Pro |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Tyr | Lys | Gln | Thr | Leu | Val | Ile | Thr | Asn | Lys | Glu | Thr | Pro | Met | Ser |     |
| 145 |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |     |
| Ile | Asp | Cys | Leu | Tyr | Thr | Asn | Thr | Thr | His | Leu | Glu | Val | Asn | Ser | Arg |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Val | Asp | Val | Val | Lys | Pro | Gly | Asn | Thr | Leu | Glu | Ile | Pro | Ile | Thr | Phe |
|     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |     |
| Tyr | Pro | Arg | Glu | Ser | Ile | Asn | Tyr | Gln | Glu | Leu | Ile | Pro | Phe | Glu | Ile |
|     | 195 |     |     |     |     | 200 |     |     |     |     |     | 205 |     |     |     |
| Asn | Gly | Leu | Ser | Gln | Gln | Thr | Val | Glu | Ile | Lys | Gly | Lys | Gly | Thr | Glu |

|   |     |     |
|---|-----|-----|
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| Met Lys Ile Leu Val Leu Asp Pro Ala Asn Arg Ile Val Lys Leu Gly |     |     |
| 225   | 230 | 235 |
| Ala Val Leu Pro Gly Gln Val Val Lys Arg Thr Val Ser Ile Met Asn |     | 240 |
|   | 245 | 250 |
| Asn Ser Leu Ala Gln Leu Thr Phe Asn Gln Ser Ile Leu Phe Thr Ile |     | 255 |
|   | 260 | 265 |
| Pro Glu Leu Gln Glu Pro Lys Val Leu Thr Leu Ala Pro Phe His Asn |     | 270 |
|   | 275 | 280 |
| Ile Thr Leu Lys Pro Lys Glu Val Cys Lys Leu Glu Val Ile Phe Ala |     | 285 |
|   | 290 | 295 |
| Pro Lys Lys Arg Val Pro Pro Phe Ser Glu Glu Val Phe Met Glu Cys |     | 300 |
| 305   | 310 | 315 |
| Met Gly Leu Leu Arg Pro Leu Phe Leu Leu Ser Gly Cys Cys Gln Ala |     | 320 |
|   | 325 | 330 |
| Leu Glu Ile Ser Leu Asp Gln Glu His Ile Pro Phe Gly Pro Val Val |     | 335 |
|   | 340 | 345 |
| Tyr Gln Thr Gln Ala Thr Arg Arg Ile Leu Met Leu Asn Thr Gly Asp |     | 350 |
|   | 355 | 360 |
| Val Gly Ala Arg Phe Lys Trp Asp Ile Lys Lys Phe Glu Pro His Phe |     | 365 |
|   | 370 | 375 |
| Ser Ile Ser Pro Glu Glu Gly Tyr Ile Thr Ser Gly Met Glu Val Ser |     | 380 |
| 385   | 390 | 395 |
| Phe Glu Val Thr Tyr His Pro Thr Glu Val Gly Lys Glu Ser Leu Cys |     | 400 |
|   | 405 | 410 |
| Lys Asn Ile Leu Cys Tyr Ile Gln Gly Gly Ser Pro Leu Ser Leu Thr |     | 415 |
|   | 420 | 425 |
| Leu Ser Gly Val Cys Val Gly Pro Pro Ala Val Lys Glu Val Val Asn |     | 430 |
|   | 435 | 440 |
| Phe Thr Cys Gln Val Arg Ser Lys His Thr Gln Thr Ile Leu Leu Ser |     | 445 |
|   | 450 | 455 |
| Asn Arg Thr Asn Gln Thr Trp Asn Leu His Pro Ile Phe Glu Gly Glu |     | 460 |
| 465   | 470 | 475 |
| His Trp Glu Gly Pro Glu Phe Ile Thr Leu Glu Ala His Gln Gln Asn |     | 480 |
|   | 485 | 490 |
| Lys Pro Tyr Glu Ile Thr Tyr Arg Pro Arg Thr Met Asn Leu Glu Asn |     | 495 |
|   | 500 | 505 |
| Arg Lys His Gln Gly Thr Leu Phe Phe Pro Leu Pro Asp Gly Thr Gly |     | 510 |
|   | 515 | 520 |
| Trp Leu Tyr Ala Leu His Gly Thr Ser Glu Leu Pro Lys Ala Val Ala |     | 525 |
|   | 530 | 535 |
| Asn Ile Tyr Arg Glu Val Pro Cys Lys Thr Pro Tyr Thr Glu Leu Leu |     | 540 |
| 545   | 550 | 555 |
| Pro Ile Thr Asn Trp Leu Asn Lys Pro Gln Arg Phe Arg Val Ile Val |     | 560 |
|   | 565 | 570 |
| Glu Ile Leu Lys Pro Glu Lys Pro Asp Leu Ser Ile Thr Met Lys Gly |     | 575 |
|   | 580 | 585 |
| Leu Asp Tyr Ile Asp Val Leu Ser Gly Ser Lys Lys Asp Tyr Lys Leu |     | 590 |
|   | 595 | 600 |
| Asn Phe Phe Ser His Lys Glu Gly Thr Tyr Ala Ala Lys Val Ile Phe |     | 605 |
|   | 610 | 615 |
| Arg Asn Glu Val Thr Asn Glu Phe Leu Tyr Tyr Asn Val Ser Phe Arg |     | 620 |
| 625   | 630 | 635 |
| Val Ile Pro Ser Gly Ile Ile Lys Thr Ile Glu Met Val Thr Pro Val |     | 640 |

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 Ser Val Thr Phe Ser Thr Glu Cys Arg Met Pro Asp Ile Ala Leu Pro  
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 785 790 795 800  
 Val Leu Phe Glu Pro Ser His Leu Gly Glu Thr Lys Gly Ile Leu Ile  
 805 810 815  
 Leu Ser Ser Leu Ala Gly Gly Glu Tyr Ile Ile Pro Leu Phe Gly Met  
 820 825 830  
 Ala Leu Pro Pro Lys Pro Gln Gly Pro Phe Ser Ile Arg Ala Gly Tyr  
 835 840 845  
 Ser Ile Ile Ile Pro Phe Lys Asn Val Phe Tyr His Met Val Thr Phe  
 850 855 860  
 Ser Ile Ile Val Asp Asn Pro Ala Phe Thr Ile Arg Ala Gly Glu Ser  
 865 870 875 880  
 Val Arg Pro Lys Lys Ile Asn Asn Ile Thr Val Ser Phe Glu Gly Asn  
 885 890 895  
 Pro Ser Gly Ser Lys Thr Pro Ile Thr Thr Lys Leu Thr Val Ser Cys  
 900 905 910  
 Pro Pro Gly Glu Gly Ser Glu Thr Gly Val Lys Trp Val Tyr Tyr Leu  
 915 920 925  
 Lys Gly Ile Thr Leu  
 930

&lt;210&gt; 2899

&lt;211&gt; 876

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2899

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 gggtaccatg gacgtgggag aacttctgag ctaccaggag ggtcattgag aggagcagta  
 120  
 gagctgcact gccgaatgtc gtagccacta gccacatagg ctgttgattg cttgaaatgt  
 180  
 gactagtctg aattgagaaa tactcccaac aggggcacaa aacgtccccg ggatgatgag  
 240  
 gaagaagaac tgaagacacg ccgcaagcaa actgggtactc gagaacgcgg ccgctatcgg  
 300

gaagaagaaa tgactgtggt ggaggaagcg gatgatgaca aaaaaaggct gctgcagatt  
 360  
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 420  
 aagaaaatga tcctcacatt tgaaaagaga tcatataaaa accaagaatt gcggattaag  
 480  
 tttccagaca atccagagaa gttcatggaa tccgagctgg acctaaatga catcattcag  
 540  
 gagatgcacg tgggtggccac catgccagac ctgtaccacc ttctggtgga gctgaatgct  
 600  
 gtacagtcgc ttctcggctt gctcggacac gataatacag atgtgtccat agctgtggtc  
 660  
 gatttgcttc aggaattaac agatatagac accctccatg agagtgaaga gggagcagaa  
 720  
 gtgctcatcg atgctctggt ggatgggcag gtggtagcac tgctggtaca gaatctggag  
 780  
 cgccctgatg agtctgtgaa agaggaggca gatggcgctcc acaacactct ggctattgtg  
 840  
 gaaaacatgg ctgagttccg gcctgagatg tgtaca  
 876

&lt;210&gt; 2900

&lt;211&gt; 189

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2900

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Thr | Val | Val | Glu | Glu | Ala | Asp | Asp | Asp | Lys | Lys | Arg | Leu | Leu | Gln |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ile | Ile | Asp | Arg | Asp | Gly | Glu | Glu | Glu | Glu | Glu | Glu | Glu | Glu | Pro | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Asp | Glu | Ser | Ser | Val | Lys | Lys | Met | Ile | Leu | Thr | Phe | Glu | Lys | Arg | Ser |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Tyr | Lys | Asn | Gln | Glu | Leu | Arg | Ile | Lys | Phe | Pro | Asp | Asn | Pro | Glu | Lys |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Phe | Met | Glu | Ser | Glu | Leu | Asp | Leu | Asn | Asp | Ile | Ile | Gln | Glu | Met | His |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Val | Val | Ala | Thr | Met | Pro | Asp | Leu | Tyr | His | Leu | Leu | Val | Glu | Leu | Asn |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ala | Val | Gln | Ser | Leu | Leu | Gly | Leu | Leu | Gly | His | Asp | Asn | Thr | Asp | Val |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Ser | Ile | Ala | Val | Val | Asp | Leu | Leu | Gln | Glu | Leu | Thr | Asp | Ile | Asp | Thr |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Leu | His | Glu | Ser | Glu | Glu | Gly | Ala | Glu | Val | Leu | Ile | Asp | Ala | Leu | Val |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Asp | Gly | Gln | Val | Val | Ala | Leu | Leu | Val | Gln | Asn | Leu | Glu | Arg | Leu | Asp |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Glu | Ser | Val | Lys | Glu | Glu | Ala | Asp | Gly | Val | His | Asn | Thr | Leu | Ala | Ile |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Val | Glu | Asn | Met | Ala | Glu | Phe | Arg | Pro | Glu | Met | Cys | Thr |     |     |     |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     |     |     |     |     |

&lt;210&gt; 2901

&lt;211&gt; 756

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2901

acgcgtcggg gaggggcttt cgactttttt gagaagcaag accaagtggc agaagagggg  
 60  
 ccgcccgtcc agagcctgaa gggcgaggat gctgaggaat ccttgaggga ggaggaggcg  
 120  
 ctggaccctc tgggcattat gcgctccaag aagcccaaga aacatcccaa agtggccgtg  
 180  
 aaagccaagc cctcgccccg gctcaccatc tttgacgagg aggtggaccc tgatgagggg  
 240  
 ctctttggcc cgggcaggaa gctgtctcca caggaccctt cggaggacgt gtcatccatg  
 300  
 gacccctga agctatttga tgatcctgac ctcggcgggg ccatccccct gggtgactcc  
 360  
 ctccctgtgc cggccgctg tgagagtggg gggcccacac ccagcctcag ccacagggag  
 420  
 gcctccaagg aactgttcag gtaccacctg tccccagcgg cgcttgacca gctctgagag  
 480  
 tgtcctggac agagccaagg gcccggtcca ttgccagtc tcagccccag cctcctctga  
 540  
 ggggaggacc ccaggcctgt gaaaagtaga agcctgtggg tgcacattgg gtgagaggcg  
 600  
 gtgaaggggg ctgaggggga ggnaantcgc ccagggtgc tcagctagtt ccagaaagag  
 660  
 agaactttgt gtgcacaacc agtctttctt ttcacaatca tattttaaca gtttatgtaa  
 720  
 agaataatta aattatataa ttgccagggc aaaaaa  
 756

&lt;210&gt; 2902

&lt;211&gt; 158

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2902

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Arg | Arg | Arg | Gly | Ala | Phe | Asp | Phe | Phe | Glu | Lys | Gln | Asp | Gln | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ala | Glu | Glu | Gly | Pro | Pro | Val | Gln | Ser | Leu | Lys | Gly | Glu | Asp | Ala | Glu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Glu | Ser | Leu | Glu | Glu | Glu | Glu | Ala | Leu | Asp | Pro | Leu | Gly | Ile | Met | Arg |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ser | Lys | Lys | Pro | Lys | Lys | His | Pro | Lys | Val | Ala | Val | Lys | Ala | Lys | Pro |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Ser | Pro | Arg | Leu | Thr | Ile | Phe | Asp | Glu | Glu | Val | Asp | Pro | Asp | Glu | Gly |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Leu | Phe | Gly | Pro | Gly | Arg | Lys | Leu | Ser | Pro | Gln | Asp | Pro | Ser | Glu | Asp |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Val | Ser | Ser | Met | Asp | Pro | Leu | Lys | Leu | Phe | Asp | Asp | Pro | Asp | Leu | Gly |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Gly | Ala | Ile | Pro | Leu | Gly | Asp | Ser | Leu | Leu | Leu | Pro | Ala | Ala | Cys | Glu |
|     |     | 115 |     |     |     | 120 |     |     |     |     |     | 125 |     |     |     |
| Ser | Gly | Gly | Pro | Thr | Pro | Ser | Leu | Ser | His | Arg | Asp | Ala | Ser | Lys | Glu |

130                                      135                                      140  
 Leu Phe Arg Tyr His Leu Ser Pro Ala Ala Leu Gly Gln Leu  
 145                                      150                                      155

<210> 2903  
 <211> 542  
 <212> DNA  
 <213> Homo sapiens

<400> 2903  
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 120  
 gactcacaga acctcagtgc ctacaacacc cggtcttca aagaggtcga tggagaaggg  
 180  
 aagccctact acgagggtgc gctggcttct gtgcttggt cagagccttc cctggactct  
 240  
 gaggtgactt ccaagtgaa gagctatgaa ttccggggaa gccctttcca ggtgaccgg  
 300  
 ggggactacg cgcccatcct ccagaagggtg gtggagcagc tggagaaagc caaggcctat  
 360  
 gcagccaaca gccaccaggg gcagatgctg gccagtata tagagagctt caccagggc  
 420  
 tccatcgagg ccacaagag gggctccgc ttctggatcc aggacaaagg ccccatcgt  
 480  
 ggagaggtga ggcgccagct ccacccacc tgccccctcc tgctgcccc tccttcacgc  
 540  
 gt  
 542

<210> 2904  
 <211> 180  
 <212> PRT  
 <213> Homo sapiens

<400> 2904  
 Lys Leu Met Phe Ser Leu Tyr Pro Arg Leu Arg His Leu Gly Leu Gly  
 1                                      5                                      10                                      15  
 Lys Glu Gly Ile Thr Thr Tyr Phe Ser Gly Asn Cys Thr Met Glu Asp  
 20                                      25                                      30  
 Ala Lys Leu Ala Gln Asp Phe Leu Asp Ser Gln Asn Leu Ser Ala Tyr  
 35                                      40                                      45  
 Asn Thr Arg Leu Phe Lys Glu Val Asp Gly Glu Gly Lys Pro Tyr Tyr  
 50                                      55                                      60  
 Glu Val Arg Leu Ala Ser Val Leu Gly Ser Glu Pro Ser Leu Asp Ser  
 65                                      70                                      75                                      80  
 Glu Val Thr Ser Lys Leu Lys Ser Tyr Glu Phe Arg Gly Ser Pro Phe  
 85                                      90                                      95  
 Gln Val Thr Arg Gly Asp Tyr Ala Pro Ile Leu Gln Lys Val Val Glu  
 100                                      105                                      110  
 Gln Leu Glu Lys Ala Lys Ala Tyr Ala Ala Asn Ser His Gln Gly Gln  
 115                                      120                                      125  
 Met Leu Ala Gln Tyr Ile Glu Ser Phe Thr Gln Gly Ser Ile Glu Ala

130                      135                      140  
 His Lys Arg Gly Ser Arg Phe Trp Ile Gln Asp Lys Gly Pro His Arg  
 145                      150                      155                      160  
 Gly Glu Val Arg Arg Gln Leu His Pro Thr Cys Pro Leu Leu Pro Ala  
                          165                      170                      175  
 Pro Pro Ser Arg  
                          180

<210> 2905  
 <211> 814  
 <212> DNA  
 <213> Homo sapiens

<400> 2905  
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 gtcacaagat ccttcttctg tattacaaat tctgccactt tgtttcagaa ctgggtatca  
 120  
 ggattcctcc tctgcccagg tttctgctgt ccccccaaaa gaaagacatg tagctgggca  
 180  
 tgggtgttaca catctgtggt cccagttact caggaggctg aggcaggagg attgcttgag  
 240  
 cccaggtggt caaggttgca gtgggctgtg aatgctctac ttcactccag cctgagcaac  
 300  
 agagcaagac cccggccctc ttctcgactt tctatccctc ctctcaaca cccttctctt  
 360  
 ctggaaaatgg gcttcggggg ggtaaccaa gcccaggga acttgctggg cccagcatct  
 420  
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 480  
 gccacgccgg gcgtccggga gctgaggctg gagggcgctt ggcaggcagg gcggggccca  
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 600  
 taaagcggca cagtcttgag ccttcgctct tcacctaagt cagtgcgc ccttcgcaaa  
 660  
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 720  
 gtcctacac cgtaagaccg tgccttcaa tgcaaagggg actgtgcggc gaggcaccga  
 780  
 caagccgtag ccttgagacc actcaaagcc tgca  
 814

<210> 2906  
 <211> 200  
 <212> PRT  
 <213> Homo sapiens

<400> 2906  
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 1                      5                      10                      15  
 Asn Arg Ile Pro Val Thr Arg Ser Phe Phe Cys Ile Thr Asn Ser Ala  
                          20                      25                      30  
 Thr Leu Phe Gln Asn Trp Val Ser Gly Phe Leu Leu Cys Pro Gly Phe



```

          35          40          45
Cys Cys Pro Pro Lys Arg Lys Thr Cys Ser Trp Ala Trp Trp Tyr Thr
  50          55          60
Ser Val Val Pro Val Thr Gln Glu Ala Glu Ala Gly Gly Leu Leu Glu
  65          70          75          80
Pro Arg Cys Ser Arg Leu Gln Trp Ala Val Asn Ala Leu Leu His Ser
          85          90          95
Ser Leu Ser Asn Arg Ala Arg Pro Arg Pro Ser Ser Arg Leu Ser Ile
          100          105          110
Pro Pro Pro Gln His Pro Phe Leu Leu Glu Met Gly Phe Gly Val Val
          115          120          125
Asn Gln Ala Gln Gly Asn Leu Arg Gly Pro Ala Ser Ser Val Arg Cys
          130          135          140
Arg Arg Ser Thr Arg Pro Arg Pro Gly Ser Ala Arg Arg Glu Lys Ala
          145          150          155          160
Ala Thr Pro Gly Val Arg Glu Leu Arg Leu Glu Gly Ala Trp Gln Ala
          165          170          175
Gly Arg Gly Pro Gly Gly Gly Ser Ala Tyr Asp Arg Arg Trp Gly Glu
          180          185          190
Leu Leu Asp Val Lys Gly Pro Leu
          195          200

```

&lt;210&gt; 2907

&lt;211&gt; 379

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2907

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ntgagaccct gtctcaaagt aaaaaattct gaaaaatgct atgaccgtga gtgaccggcc
  60
atcagcaggc tgtgatctgc cgaaactcat gacagcgagc ctcaatggct gggctcttaag
  120
aaacagcatc ttcacttttc ccaggctgct ttccaatttc caactactgtc cccaagatta
  180
caaaggcaaa ggaattcttc ccttaatggt ggacggctct gagactgttc caccctgggc
  240
tcattacact gggaccagct ttaagcttcc ctgttcaacg cggagagctc cacagcccag
  300
gacgacagag cagatgatgg cacgacgccc tcaaaaccca gacaggcctt cttggcttgc
  360
cctggccgat gccaccggt
  379

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&lt;210&gt; 2908

&lt;211&gt; 113

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2908

```

Met Thr Val Ser Asp Arg Pro Ser Ala Gly Cys Asp Leu Pro Lys Leu
  1          5          10          15
Met Thr Ala Ser Leu Asn Gly Trp Val Leu Arg Asn Ser Ile Phe Thr
          20          25          30
Phe Pro Arg Leu Leu Ser Asn Phe Gln His Cys Pro Gln Asp Tyr Lys

```

```
<210> 2909
<211> 2420
<212> DNA
<213> Homo sapiens
```

2139

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1140  
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1200  
aatagtgaga gagaaaatcc caaacatttg agacaggggt caaaagcacc cagacgcctt  
1260  
ctgtctcttt cccagttccc atctggctag ggactgtgaa tcagaattca gaatctgtgc  
1320  
tgccctgagg ggacaggcac ccaaatgcaa taaataacac caagctcagg acccagccac  
1380  
tgaccttctt ccaccactgc tgcggggtat tcctcgatgg gaactgaagg atccaagga  
1440  
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1620  
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1680  
cgccaccag tcctctgcag tttctccacc ggagaacact tggggagctg tcacaaggcc  
1740  
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1800  
gggccagtcc tcaactggaat caggggtcaa gagcgccagg tctgcctgtg tctgggtctc  
1860  
atcggcaggc tagtgtaaca acgtgaatta aaactgtgca tattcgcatg agaaaactgg  
1920  
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1980  
catggtgggg cccattcctg aggtaacgtg cagccctgag gctgggtccga acgggaggag  
2040  
acttctccag cagcccaggt gccagtccac acagacagga ctggaagccc ctgggcagca  
2100  
ggtcaggtga cccggggagt gcagcctgag ccccaacgg cagcaaacgt gaaggtctca  
2160  
ggtgggttaca gaatcactca gccctcaggc cccaccact ctctcccag cagccctgca  
2220  
gcacacatcc ctgcatctgt cccgagagcc ccagccctgc aggcattctg gcctgaatgc  
2280  
caggcagctg gtccaccctg cagccatgct gcacgtctga ctgagaactg agcaccagat  
2340  
aaagaagcat tggtccttgt cagcctctct gacttttgca gttagggctg catccattta  
2400  
aatatgtaga aaaatagcca  
2420

&lt;210&gt; 2910

&lt;211&gt; 153

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2910

Met Gly Thr Glu Gly Ser Lys Gly Gly Ile Arg Ser Ala Pro Lys Pro

```

      1           5           10           15
Pro Cys Thr Thr Ser Asn Ala Gly Val Trp Leu Leu Leu Leu His Arg
      20           25           30
Thr Glu Pro Pro Val Phe Cys Leu Arg Ala Ser Phe Met Ala Trp Thr
      35           40           45
Gly Asn Ala Met Cys Ser His Lys Cys Thr Thr Ile Val His Gln His
      50           55           60
Leu Tyr Asn Ile Lys Gly Val Ile Tyr Lys Ser Thr Ala Ile Val His
      65           70           75           80
Arg Met Val Met Ala Gly Glu Pro Arg Pro Pro Val Leu Cys Ser Phe
      85           90           95
Ser Thr Gly Glu His Leu Gly Ser Cys His Lys Ala Arg Gly Gly Pro
      100          105          110
Ser Leu Gly Leu Ser Trp Gly Arg Gln Gln Val Cys Lys Asp Ser Ser
      115          120          125
Gly Pro Val Leu Thr Gly Ile Arg Gly Gln Glu Arg Gln Val Cys Leu
      130          135          140
Cys Leu Gly Leu Ile Gly Arg Leu Val
145           150

```

&lt;210&gt; 2911

&lt;211&gt; 1327

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2911

```

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120
gctgctggagc ccgggaagcg gagcgagggc gggaagaccc ccgtggcccc gagcagcgga
180
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240
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300
cagttactga aactagaaac caatgaattc caacaacttc aaagtaaaat cagtttaatt
360
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420
gctcatctaa agcgtctaca ggaagaaatt aatgaggtaa aaacttggtc caataggata
480
actgaaaaac aggatatact gaacaacagt ctgacgacgc tttctcaaga cattacaaaa
540
gtagacaaaa gtacaacttc catggcaaaa gatgttggtc tcaagattac aagtgtaaaa
600
acagatatac gacggatttc aggttttagta actgatgtaa tatcattgac agattctgtg
660
caagaactag aaaataaaat agagaaagta gaaaaaata cagtaaaaaa tataggtgat
720
cttctttcaa gcagtattga tcgaacagca acgctccgaa agacagcatc tgaaaattca
780
caaagaatta actctgttaa gaagacgcta accgaactaa agagtgactt cgacaaacat
840

```

acagatagat ttctaagctt agaaggtgac agagccaaag ttctgaagac agtgactttt  
 900  
 gcaaatgac taaaaccaa ggtgtataat ctaaagaagg acttttcccg tttagaacca  
 960  
 ttagtaaatg atttaacact acgcattggg agattgggta ccgacttact acaaagagag  
 1020  
 aaagaaattg ctttcttaag tgaaaaaata tctaatttaa caatagtcca agctgagatt  
 1080  
 aaggatatta aagatgaaat agcacacatt tcagatatga attagtttga cattattgag  
 1140  
 attagactaa ggtaattttt ttaatgggac ctctcatgag aagactggta aatcaaaaat  
 1200  
 aatgatattt tggagcaaaa gtcattttat atttaatcct attttgtaca gtaaaaaata  
 1260  
 aactttaaaa caggttgatt ttccaaaata aatatgctaa aacctatttt tgcaacttta  
 1320  
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 1327

<210> 2912

<211> 350

<212> PRT

<213> Homo sapiens

<400> 2912

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | Glu | Val | Lys | Ser | Arg | Lys | Lys | Ser | Gly | Pro | Lys | Gly | Ala | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ala | Ala | Glu | Pro | Gly | Lys | Arg | Ser | Glu | Gly | Gly | Lys | Thr | Pro | Val | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Arg | Ser | Ser | Gly | Gly | Gly | Gly | Trp | Ala | Asp | Pro | Arg | Thr | Cys | Leu | Ser |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Leu | Leu | Ser | Leu | Gly | Thr | Cys | Leu | Gly | Leu | Ala | Trp | Phe | Val | Phe | Gln |
|     |     |     | 50  |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Gln | Ser | Glu | Lys | Phe | Ala | Lys | Val | Glu | Asn | Gln | Tyr | Gln | Leu | Leu | Lys |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Leu | Glu | Thr | Asn | Glu | Phe | Gln | Gln | Leu | Gln | Ser | Lys | Ile | Ser | Leu | Ile |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ser | Glu | Lys | Trp | Gln | Lys | Ser | Glu | Ala | Ile | Met | Glu | Gln | Leu | Lys | Ser |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Phe | Gln | Ile | Ile | Ala | His | Leu | Lys | Arg | Leu | Gln | Glu | Glu | Ile | Asn | Glu |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Val | Lys | Thr | Trp | Ser | Asn | Arg | Ile | Thr | Glu | Lys | Gln | Asp | Ile | Leu | Asn |
|     |     |     | 130 |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Asn | Ser | Leu | Thr | Thr | Leu | Ser | Gln | Asp | Ile | Thr | Lys | Val | Asp | Gln | Ser |
| 145 |     |     |     |     | 150 |     |     |     | 155 |     |     |     |     | 160 |     |
| Thr | Thr | Ser | Met | Ala | Lys | Asp | Val | Gly | Leu | Lys | Ile | Thr | Ser | Val | Lys |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     |     | 175 |     |
| Thr | Asp | Ile | Arg | Arg | Ile | Ser | Gly | Leu | Val | Thr | Asp | Val | Ile | Ser | Leu |
|     |     |     | 180 |     |     |     | 185 |     |     |     |     |     | 190 |     |     |
| Thr | Asp | Ser | Val | Gln | Glu | Leu | Glu | Asn | Lys | Ile | Glu | Lys | Val | Glu | Lys |
|     |     |     | 195 |     |     | 200 |     |     |     |     | 205 |     |     |     |     |
| Asn | Thr | Val | Lys | Asn | Ile | Gly | Asp | Leu | Leu | Ser | Ser | Ser | Ile | Asp | Arg |
|     |     |     | 210 |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Thr | Ala | Thr | Leu | Arg | Lys | Thr | Ala | Ser | Glu | Asn | Ser | Gln | Arg | Ile | Asn |

|            |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| <400> 2914 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
| Met        | Ala | Gly | Gly | Ser | Ser | Gly | Ser | Ser | Ser | Glu | Lys | Met | Ala | Arg | Tyr |  |
| 1          |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |  |
| Trp        | Val | Met | Ile | Ser | Lys | Arg | Trp | Thr | Arg | Glu | Ala | Leu | Asp | Gly | Phe |  |
|            |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |  |
| Cys        | Asn | Met | Glu | Ile | Gly | Ile | Ile | Ile | Arg | Asn | Gly | Ser | Gln | Asp | Gly |  |
|            | 35  |     |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |  |
| Pro        | Glu | Pro | Ser | Ile | Ser | Gly | Leu | Lys | Lys | Leu | His | Pro | Gln | Leu | Ser |  |
|            | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |  |
| Leu        | Ser | Glu | Asp | Val | His | Ala | Pro | Gln | Val | Ala | Asn | Asp | Thr | Glu | Ala |  |
| 65         |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |  |
| Gly        | Arg | Lys | Leu | Asp | Val | Gly | Pro | Gln | Leu | Leu | Asp | Gln | Leu | Ala | Gln |  |

|     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|
|     | 85  |     | 90  |     | 95  |
| His | Gln | Leu | His | Gly | Leu |
|     |     |     | Ala | His | Phe |
|     |     |     | Val | His | Asp |
|     |     |     | Ala | Leu | Asp |
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 <213> Homo sapiens

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<211> 519

<212> PRT

<213> Homo sapiens

<400> 2916

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Glu | Asp | His | Leu | Lys | His | Leu | Arg | Thr | Leu | Glu | Lys | Thr | Leu | Glu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Lys | Met | Glu | Arg | Gln | Lys | Arg | Gln | Gln | Gln | Ala | Ala | Gln | Ile | Arg | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ile | Gln | Glu | Val | Glu | Leu | Lys | Ala | Ser | Ala | Ala | Asp | Arg | Glu | Ile | Tyr |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Leu | Leu | Arg | Thr | Ser | Leu | His | Arg | Glu | Arg | Glu | Gln | Ala | Gln | Gln | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| His | Gln | Leu | Leu | Ala | Leu | Lys | Glu | Gln | Glu | His | Arg | Lys | Glu | Leu | Glu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Thr | Arg | Glu | Phe | Phe | Thr | Asp | Ala | Asp | Phe | Gln | Asp | Ala | Leu | Ala | Lys |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Glu | Ile | Ala | Lys | Glu | Glu | Lys | Lys | His | Glu | Gln | Met | Ile | Lys | Glu | Tyr |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Gln | Glu | Lys | Ile | Asp | Val | Leu | Ser | Gln | Gln | Tyr | Met | Asp | Leu | Glu | Asn |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Glu | Phe | Arg | Ile | Ala | Leu | Thr | Val | Glu | Ala | Arg | Arg | Phe | Gln | Asp | Val |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Lys | Asp | Gly | Phe | Glu | Asn | Val | Ala | Thr | Glu | Leu | Ala | Lys | Ser | Lys | His |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Ala | Leu | Ile | Trp | Ala | Gln | Arg | Lys | Glu | Asn | Glu | Ser | Ser | Ser | Leu | Ile |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Lys | Asp | Leu | Thr | Cys | Met | Val | Lys | Glu | Gln | Lys | Thr | Lys | Leu | Ala | Glu |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Val | Ser | Lys | Leu | Lys | Gln | Glu | Thr | Ala | Ala | Asn | Leu | Gln | Asn | Gln | Ile |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Asn | Thr | Leu | Glu | Ile | Leu | Ile | Glu | Asp | Asp | Lys | Gln | Lys | Ser | Ile | Gln |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Ile | Glu | Leu | Leu | Lys | His | Glu | Lys | Val | Gln | Leu | Ile | Ser | Glu | Leu | Ala |
| 225 |     |     |     | 230 |     |     |     |     |     | 235 |     |     |     | 240 |     |
| Ala | Lys | Glu | Ser | Leu | Ile | Phe | Gly | Leu | Arg | Thr | Glu | Arg | Lys | Val | Trp |
|     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |     |
| Gly | His | Glu | Leu | Ala | Gln | Gln | Gly | Ser | Ser | Leu | Ala | Gln | Asn | Arg | Gly |



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 Arg Lys Thr Asn Glu Ser Asp Ser Asp Ala Leu Arg Ile Lys Cys Lys  
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 325 330 335  
 Ile Glu Lys Cys Thr Gln Glu Gln Leu Asp Glu Lys Ser Ser Gln Leu  
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 Leu Lys Gln Gln Leu Lys Gly Lys Glu Val Glu Leu Glu Glu Ile Arg  
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 Arg Gln Val Asp Ala Ile Val Glu Ala His Gln Ala Glu Ile Ala Gln  
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 465 470 475 480  
 His Gln Ile Glu Lys Glu Met Arg Glu Leu Leu Glu Glu Thr Cys Lys  
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&lt;210&gt; 2917

&lt;211&gt; 2636

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2917

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<211> 509

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<213> Homo sapiens

<400> 2918

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| Xaa | Cys | Val | Cys | His | Arg | Trp | Phe | Gln | Pro | Ala | Ile | Pro | Ser | Trp | Leu |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Gln | Lys | Thr | Tyr | Asn | Glu | Ala | Leu | Ala | Arg | Val | Gln | Arg | Xaa | Val | Gln |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Met | Asp | Glu | Leu | Val | Pro | Leu | Gly | Glu | Leu | Thr | Lys | His | Ser | Thr | Ser |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ala | Val | Asp | Leu | Ser | Thr | Xaa | Phe | Ala | Gln | Ile | Ser | His | Thr | Ala | Arg |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Gln | Leu | Asp | Trp | Pro | Asp | Pro | Glu | Glu | Ala | Phe | Met | Ile | Thr | Val | Lys |
| 65  |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     | 80  |     |
| Phe | Val | Glu | Asp | Thr | Cys | Arg | Leu | Ala | Leu | Val | Tyr | Cys | Ser | Leu | Ile |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Lys | Ala | Arg | Ala | Arg | Glu | Leu | Ser | Ser | Gly | Gln | Lys | Asp | Gln | Gly | Gln |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Ala | Ala | Asn | Met | Leu | Cys | Val | Val | Val | Asn | Asp | Met | Glu | Gln | Leu | Arg |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Leu | Val | Ile | Gly | Lys | Leu | Pro | Ala | Gln | Leu | Ala | Trp | Glu | Ala | Leu | Glu |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Gln | Arg | Val | Gly | Ala | Val | Leu | Glu | Gln | Gly | Gln | Leu | Gln | Asn | Thr | Leu |
| 145 |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     | 160 |     |
| His | Ala | Gln | Leu | Gln | Ser | Ala | Leu | Ala | Gly | Leu | Gly | His | Glu | Ile | Arg |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Thr | Gly | Val | Arg | Thr | Leu | Ala | Glu | Gln | Leu | Glu | Val | Gly | Ile | Ala | Lys |
|     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |     |
| His | Ile | Gln | Lys | Leu | Val | Gly | Val | Arg | Glu | Ser | Val | Leu | Pro | Glu | Asp |
|     |     | 195 |     |     |     | 200 |     |     |     |     |     | 205 |     |     |     |
| Ala | Ile | Leu | Pro | Leu | Met | Lys | Phe | Leu | Glu | Val | Glu | Leu | Cys | Tyr | Met |

|   |     |     |
|---|-----|-----|
| 210   | 215 | 220 |
| Asn Thr Asn Leu Val Gln Glu Asn Phe Ser Ser Leu Leu Thr Leu Leu |     |     |
| 225   | 230 | 235 |
| Trp Thr His Thr Leu Thr Val Leu Val Glu Ala Ala Ser Gln Arg     |     | 240 |
|   | 245 | 250 |
| Ser Ser Ser Leu Ala Ser Asn Arg Leu Lys Ile Ala Leu Gln Asn Leu |     | 255 |
|   | 260 | 265 |
| Glu Ile Cys Phe His Ala Glu Gly Cys Gly Leu Pro Pro Lys Ala Leu |     | 270 |
|   | 275 | 280 |
| His Thr Ala Thr Phe Gln Ala Leu Gln Arg Asp Leu Glu Leu Gln Ala |     | 285 |
|   | 290 | 295 |
| Ala Ser Ser Arg Glu Leu Ile Arg Lys Tyr Phe Cys Ser Arg Ile Gln |     | 300 |
| 305   | 310 | 315 |
| Gln Gln Ala Glu Thr Thr Ser Glu Glu Leu Gly Ala Val Thr Val Lys |     |     |
|   | 325 | 330 |
| Ala Ser Tyr Arg Ala Ser Glu Gln Lys Leu Arg Val Glu Leu Leu Ser |     | 335 |
|   | 340 | 345 |
| Ala Ser Ser Leu Leu Pro Leu Asp Ser Asn Gly Ser Ser Asp Pro Phe |     | 350 |
|   | 355 | 360 |
| Val Gln Leu Thr Leu Glu Pro Arg His Glu Phe Pro Glu Leu Ala Ala |     | 365 |
|   | 370 | 375 |
| Arg Glu Thr Gln Lys His Lys Lys Asp Leu His Pro Leu Phe Asp Glu |     | 380 |
| 385   | 390 | 395 |
| Thr Phe Glu Phe Leu Val Pro Ala Glu Pro Cys Arg Lys Ala Gly Ala |     | 400 |
|   | 405 | 410 |
| Cys Leu Leu Leu Thr Val Leu Asp Tyr Asp Thr Leu Gly Ala Asp Asp |     | 415 |
|   | 420 | 425 |
| Leu Glu Gly Glu Ala Phe Leu Pro Leu Arg Glu Val Pro Gly Leu Ser |     | 430 |
|   | 435 | 440 |
| Gly Ser Glu Glu Pro Gly Glu Val Pro Gln Thr Arg Leu Pro Leu Thr |     | 445 |
|   | 450 | 455 |
| Tyr Pro Ala Pro Asn Gly Asp Pro Ile Leu Gln Leu Leu Glu Gly Arg |     | 460 |
| 465   | 470 | 475 |
| Lys Gly Asp Arg Glu Ala Gln Val Phe Val Arg Leu Arg Arg His Arg |     | 480 |
|   | 485 | 490 |
| Ala Lys Gln Ala Ser Gln His Ala Leu Arg Pro Ala Pro             |     | 495 |
|   | 500 | 505 |

&lt;210&gt; 2919

&lt;211&gt; 455

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2919

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180

gctggctggc tcaggatggc tttacctatg tggctccttg agagatcatt gagaagacta

240

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300

gcaagatggg tagtgagaag gctggacacc tgccgggcca gacctgagtg cacagcctct  
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 455

<210> 2920  
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 <212> PRT  
 <213> Homo sapiens

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 Arg Gln Val Ser Ser Leu Leu Thr Asn His Leu Ala Arg Ala Thr Glu  
 35 40 45  
 Cys Cys Gly Asn Gln Ala Ala Gly Asn Asp Ala Leu Gln Asp Val Leu  
 50 55 60  
 Ser Leu Leu Asn Asp Leu Ser Arg Ser His Ile Gly Lys Ala Ile Leu  
 65 70 75 80  
 Ser Gln Pro Ala Cys Val Ser Lys Leu Leu Ser Leu Leu Leu Asp Gln  
 85 90 95  
 Arg Pro Ser Pro Lys Leu Val Leu Ile Leu Gln Leu Cys Arg Ala  
 100 105 110  
 Ala Leu Pro Leu Met Ser Val Glu Asp Cys Gly Asn Val Glu Leu Pro  
 115 120 125  
 Pro Trp Ser Tyr Ser Val Pro Ser Leu Asn Ser Glu Gln Glu Asp  
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<210> 2921  
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 <212> DNA  
 <213> Homo sapiens

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 180  
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 240  
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 300  
 gagcagaacc aggtgctcaa caccaacagc cggtagctgc atgacaacat cgtggactat  
 360  
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 420  
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gtgggtggtat tagatcatgc gtatcacggc cacctgagct ccctgattga catcagtgccc  
540  
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720  
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840  
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900  
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1200  
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1855

&lt;210&gt; 2922

&lt;211&gt; 452

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2922

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|   |     |     |     |
|---|-----|-----|-----|
| 1   | 5   | 10  | 15  |
| Arg Leu Ile Ser Ser Ser Cys Arg Leu Phe Phe Pro Glu Asp Pro Val |     |     |     |
|   | 20  | 25  | 30  |
| Lys Ile Val Arg Ala Gln Gly Gln Tyr Met Tyr Asp Glu Gln Gly Ala |     |     |     |
|   | 35  | 40  | 45  |
| Glu Tyr Ile Asp Cys Ile Ser Asn Val Ala His Val Gly His Cys His |     |     |     |
|   | 50  | 55  | 60  |
| Pro Leu Val Val Gln Ala Ala His Glu Gln Asn Gln Val Leu Asn Thr |     |     |     |
|   | 65  | 70  | 75  |
| Asn Ser Arg Tyr Leu His Asp Asn Ile Val Asp Tyr Ala Gln Arg Leu |     |     |     |
|   | 85  | 90  | 95  |
| Ser Glu Thr Leu Pro Glu Gln Leu Cys Val Phe Tyr Phe Leu Asn Ser |     |     |     |
|   | 100 | 105 | 110 |
| Gly Ser Glu Ala Asn Asp Leu Ala Leu Arg Leu Ala Arg His Tyr Thr |     |     |     |
|   | 115 | 120 | 125 |
| Gly His Gln Asp Val Val Val Leu Asp His Ala Tyr His Gly His Leu |     |     |     |
|   | 130 | 135 | 140 |
| Ser Ser Leu Ile Asp Ile Ser Pro Tyr Lys Phe Arg Asn Leu Asp Gly |     |     |     |
|   | 145 | 150 | 155 |
| Gln Lys Glu Trp Val His Val Ala Pro Leu Pro Asp Thr Tyr Arg Gly |     |     |     |
|   | 165 | 170 | 175 |
| Pro Tyr Arg Xaa Arg Thr Thr Pro Thr Gln Leu Trp Xaa Tyr Ala Asn |     |     |     |
|   | 180 | 185 | 190 |
| Glu Val Lys Arg Val Val Ser Ser Ala Gln Glu Lys Gly Arg Lys Ile |     |     |     |
|   | 195 | 200 | 205 |
| Ala Ala Phe Phe Ala Glu Ser Leu Pro Ser Val Gly Gly Gln Ile Ile |     |     |     |
|   | 210 | 215 | 220 |
| Pro Pro Ala Gly Tyr Phe Ser Gln Val Ala Glu His Ile Arg Lys Ala |     |     |     |
|   | 225 | 230 | 235 |
| Gly Gly Val Phe Val Ala Asp Glu Ile Gln Val Gly Phe Gly Arg Val |     |     |     |
|   | 245 | 250 | 255 |
| Gly Lys His Phe Trp Ala Phe Gln Leu Gln Gly Lys Asp Phe Val Pro |     |     |     |
|   | 260 | 265 | 270 |
| Asp Ile Val Thr Met Gly Lys Ser Ile Gly Asn Gly His Pro Val Ala |     |     |     |
|   | 275 | 280 | 285 |
| Cys Val Ala Ala Thr Gln Pro Val Ala Arg Ala Phe Glu Ala Thr Gly |     |     |     |
|   | 290 | 295 | 300 |
| Val Glu Tyr Phe Asn Thr Phe Gly Gly Ser Pro Val Ser Cys Ala Val |     |     |     |
|   | 305 | 310 | 315 |
| Gly Leu Ala Val Leu Asn Val Leu Glu Lys Glu Gln Leu Gln Asp His |     |     |     |
|   | 325 | 330 | 335 |
| Ala Thr Ser Val Gly Ser Phe Leu Met Gln Leu Leu Trp Gln Gln Lys |     |     |     |
|   | 340 | 345 | 350 |
| Ile Arg His Pro Ile Val Gly Asp Val Arg Gly Val Gly Leu Phe Ile |     |     |     |
|   | 355 | 360 | 365 |
| Gly Val Asp Leu Ile Lys Asp Glu Ala Thr Arg Thr Pro Ala Thr Glu |     |     |     |
|   | 370 | 375 | 380 |
| Glu Ala Xaa Val Tyr Leu Val Ser Arg Leu Lys Glu Asn Tyr Val Leu |     |     |     |
|   | 385 | 390 | 395 |
| Leu Ser Thr Asp Gly Pro Gly Arg Asn Ile Leu Lys Phe Lys Pro Pro |     |     |     |
|   | 405 | 410 | 415 |
| Met Cys Phe Ser Leu Asp Asn Ala Arg Gln Val Val Ala Lys Leu Asp |     |     |     |
|   | 420 | 425 | 430 |
| Ala Ile Leu Thr Asp Met Glu Glu Lys Val Arg Ser Cys Glu Thr Leu |     |     |     |

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Arg Leu Gln Pro  
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440

445

<210> 2923  
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<212> DNA  
<213> Homo sapiens

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tgagagcccct ccccggtggg accaccctcc ttccagcaaa atgccggcca agctcaagga  
180  
gaaacagcgt ttattgtgga ggggagctgg gcggggctca gcctcggaga actggcagta  
240  
cagccgcccc agcctcggct ccacccatag ccggaacggg atctccagga tggcagagaa  
300  
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360  
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420  
tagccataca tgaccatgtc tgacacgggg atatgagagg agtccgtcat ctctcgaaac  
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<210> 2924  
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<212> PRT  
<213> Homo sapiens

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35 40 45  
Arg Arg Thr Gly Ser Thr Ala Ala Pro Ala Ser Ala Pro Pro Ile Ala  
50 55 60  
Gly Thr Gly Ser Pro Gly Trp Gln Arg Ser Leu Gln Pro Ala Leu Gly  
65 70 75 80  
Pro Arg Thr Ala Ser Trp Gln Trp Trp Glu Gln  
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<210> 2925  
<211> 1999  
<212> DNA  
<213> Homo sapiens



&lt;400&gt; 2925

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240  
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480  
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660  
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720  
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<210> 2926

<211> 305

<212> PRT

<213> Homo sapiens

<400> 2926

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Lys | Val | Lys | Lys | Gly | Glu | Ile | Arg | Asp | Leu | Lys | Thr | Lys | Thr | Arg |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Glu | Asp | Pro | Lys | Glu | Asn | Arg | Lys | Thr | Lys | Lys | Glu | Lys | Phe | Val | Glu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ser | Gln | Val | Glu | Ser | Glu | Ser | Ser | Val | Leu | Asn | Asp | Ser | Pro | Phe | Pro |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Glu | Asp | Asp | Asn | Glu | Gly | Leu | His | Ser | Asp | Ser | Arg | Glu | Glu | Lys | Gln |
|     |     |     | 50  |     |     |     | 55  |     |     |     | 60  |     |     |     |     |
| Asn | Thr | Lys | Ser | Ala | Arg | Glu | Arg | Ala | Gly | Gln | Asp | Met | Gly | Leu | Glu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| His | Gly | Phe | Glu | Lys | Pro | Leu | Asp | Ser | Ala | Met | Ser | Ala | Glu | Glu | Asp |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Thr | Asp | Val | Arg | Gly | Arg | Arg | Lys | Lys | Lys | Thr | Pro | Arg | Lys | Ala | Glu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Asp | Thr | Arg | Glu | Asn | Arg | Lys | Leu | Glu | Asn | Lys | Asn | Ala | Phe | Leu | Glu |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Lys | Lys | Thr | Val | Pro | Lys | Lys | Gln | Arg | Asn | Gln | Asp | Arg | Ser | Lys | Ser |
|     |     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |
| Ala | Ala | Glu | Leu | Glu | Lys | Leu | Met | Pro | Val | Ser | Ala | Gln | Thr | Pro | Lys |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Gly | Arg | Arg | Leu | Ser | Gly | Glu | Glu | Arg | Gly | Leu | Trp | Ser | Thr | Asp | Ser |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Ala | Glu | Glu | Asp | Lys | Glu | Thr | Lys | Arg | Asn | Glu | Ser | Lys | Glu | Lys | Tyr |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Gln | Lys | Arg | His | Asp | Ser | Asp | Lys | Glu | Glu | Lys | Gly | Arg | Lys | Glu | Pro |
|     |     |     | 195 |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Lys | Gly | Leu | Lys | Thr | Leu | Lys | Glu | Ile | Arg | Asn | Ala | Phe | Asp | Leu | Phe |
|     |     |     | 210 |     |     |     | 215 |     |     |     |     | 220 |     |     |     |
| Lys | Leu | Thr | Pro | Glu | Glu | Lys | Asn | Asp | Val | Ser | Glu | Asn | Asn | Arg | Lys |
|     |     |     |     |     | 225 |     | 230 |     |     | 235 |     |     |     | 240 |     |
| Arg | Glu | Glu | Ile | Pro | Leu | Asp | Phe | Lys | Thr | Ile | Asp | Asp | His | Lys | Thr |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|
|     |     |     |     | 245 |     |     |     |     |     | 250 |     |     |     |     |     | 255 |  |  |  |
| Lys | Glu | Asn | Lys | Gln | Ser | Leu | Lys | Glu | Arg | Arg | Asn | Thr | Arg | Asp | Glu |     |  |  |  |
|     |     |     | 260 |     |     |     |     | 265 |     |     |     |     |     | 270 |     |     |  |  |  |
| Thr | Asp | Thr | Trp | Ala | Tyr | Ile | Ala | Ala | Glu | Gly | Asp | Gln | Glu | Val | Leu |     |  |  |  |
|     |     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |     |  |  |  |
| Asp | Ser | Val | Cys | Gln | Ala | Asp | Glu | Asn | Ser | Gly | Glu | Phe | Gly | Ile | Ile |     |  |  |  |
|     | 290 |     |     |     |     | 295 |     |     |     |     | 300 |     |     |     |     |     |  |  |  |
| Leu |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |
| 305 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |

&lt;210&gt; 2927

&lt;211&gt; 1084

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2927

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1084

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 <211> 292  
 <212> PRT  
 <213> Homo sapiens

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 50 55 60  
 Gln Asn Pro Leu Val Ser Glu Arg Leu Glu Leu Ser Val Leu Tyr Lys  
 65 70 75 80  
 Glu Tyr Ala Glu Asp Asp Asn Ile Tyr Gln Gln Lys Ile Lys Asp Leu  
 85 90 95  
 His Lys Lys Tyr Ser Tyr Ile Arg Lys Thr Arg Pro Asp Gly Asn Cys  
 100 105 110  
 Phe Tyr Arg Ala Phe Gly Phe Ser His Leu Glu Ala Leu Leu Asp Asp  
 115 120 125  
 Ser Lys Glu Leu Gln Arg Phe Lys Ala Val Ser Ala Lys Ser Lys Glu  
 130 135 140  
 Asp Leu Val Ser Gln Gly Phe Thr Glu Phe Thr Ile Glu Asp Phe His  
 145 150 155 160  
 Asn Thr Phe Met Asp Leu Ile Glu Gln Val Glu Lys Gln Thr Ser Val  
 165 170 175  
 Ala Asp Leu Leu Ala Ser Phe Asn Asp Gln Ser Thr Ser Asp Tyr Leu  
 180 185 190  
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| Phe Glu Cys Pro Gly Thr Pro Glu Ala Ala Ile Thr Ser Leu Thr Ser |     |     |     |     |
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| Gln Asp Ile Pro Phe Val Ser Thr Asp Ile Ile Asn Thr Leu Lys Asn |     |     |     |     |
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| Asp Pro Asp Ser Ala Leu Gly Asn Gly Ser Gly Glu Phe Ser Gln Asn |     |     |     |     |
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| Ser Met Glu Glu Lys Gln Glu Thr Lys Ser Thr Asp Gly Gln Glu Pro |     |     |     |     |
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| His Ser Val Val Tyr Asp Thr Ser Asn Gly Lys Lys Val Val Asp Ser |     |     |     |     |
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| Asp Asp Leu Leu Pro Pro Val Asp Arg Ile Asp Lys Asn Ser Thr Ala |     |     |     |     |
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| Ser Tyr Leu Lys Asn Tyr Pro Leu Tyr Arg Gln Asp Tyr Asn Pro Lys |     |     |     |     |
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| Pro Lys Pro Ser Asn Glu Ile Thr Arg Glu Tyr Ile Pro Lys Ile Gly |     |     |     |     |
|   | 755 |     | 760 | 765 |
| Met Thr Thr Tyr Lys Ile Val Pro Pro Lys Ser Leu Glu Ile Ser Lys |     |     |     |     |
|   | 770 |     | 775 | 780 |
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| 785   |     | 790 |     | 795 |
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<213> Homo sapiens

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| Lys | Gln | Arg | Gln | Asp | Glu | Glu | Arg | Met | Val | Gln | Ser | Ser | Pro | Pro | Ile |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ser | Gly | Glu | Asp | Asn | Lys | Trp | Glu | Arg | Glu | Ser | Gln | Glu | Thr | Thr | Arg |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Glu | Leu | Leu | Lys | Val | Lys | Asp | Arg | Leu | Ile | Glu | Val | Glu | Arg | Asn | Asn |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Ala | Thr | Leu | Gln | Ala | Glu | Lys | Gln | Ala | Leu | Lys | Thr | Gln | Leu | Lys | Gln |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Leu | Glu | Thr | Gln | Asn | Asn | Asn | Leu | Gln | Ala | Gln | Ile | Leu | Ala | Leu | Gln |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
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|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Asn | Ala | Lys | Leu | Gln | Val | Glu | Asn | Ser | Thr | Leu | Asn | Ser | Gln | Ser | Thr |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
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|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Glu | Asn | Glu | Asn | Glu | Ser | Val | Ile | Lys | Glu | Arg | Glu | Asp | Leu | Lys | Ser |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
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| Glu | Arg | Gln | Ala | Ser | Glu | Tyr | Glu | Ser | Leu | Ile | Ser | Lys | His | Gly | Thr |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Leu | Lys | Ser | Ala | His | Lys | Asn | Leu | Glu | Val | Glu | His | Arg | Asp | Leu | Glu |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Asp | Arg | Tyr | Asn | Gln | Leu | Leu | Lys | Gln | Lys | Gly | Gln | Leu | Glu | Asp | Leu |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Glu | Lys | Met | Leu | Lys |     |     |     |     |     |     |     |     |     |     |     |
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<210> 2936  
<211> 109  
<212> PRT  
<213> Homo sapiens

<400> 2936  
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|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| 1   |     | 5   |     | 10  |     | 15  |     |     |     |     |     |     |     |     |     |  |
| Pro | Leu | Pro | Ser | Cys | Gln | Tyr | Arg | Asp | Lys | Leu | Lys | Lys | Lys | Lys | Lys |  |
|     |     | 20  |     | 25  |     | 30  |     |     |     |     |     |     |     |     |     |  |
| Val | Lys | Val | Lys | Met | Glu | Lys | Lys | Ser | Thr | Pro | Ser | Arg | Gly | Ser | Ser |  |
|     |     | 35  |     | 40  |     | 45  |     |     |     |     |     |     |     |     |     |  |
| Ser | Lys | Ser | Ser | Ser | Arg | Gln | Leu | Ser | Glu | Ser | Phe | Lys | Ser | Lys | Glu |  |
|     |     | 50  |     | 55  |     | 60  |     |     |     |     |     |     |     |     |     |  |
| Phe | Val | Ser | Ser | Asp | Glu | Ser | Ser | Ser | Gly | Glu | Asn | Lys | Ser | Lys | Lys |  |
| 65  |     |     |     | 70  |     | 75  |     |     |     |     |     |     |     | 80  |     |  |
| Lys | Arg | Arg | Arg | Ser | Glu | Asp | Ser | Glu | Glu | Glu | Glu | Leu | Ala | Ser | Thr |  |
|     |     |     | 85  |     |     | 90  |     |     |     |     |     |     |     | 95  |     |  |
| Pro | Pro | Ser | Ser | Glu | Asp | Ser | Ala | Ser | Gly | Ser | Asp | Glu |     |     |     |  |
|     |     | 100 |     |     |     | 105 |     |     |     |     |     |     |     |     |     |  |

&lt;210&gt; 2937

&lt;211&gt; 749

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2937

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749

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&lt;210&gt; 2938

&lt;211&gt; 249

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2938

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<212> DNA
<213> Homo sapiens
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420
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480

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2100



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<210> 2940

<211> 357

<212> PRT

<213> Homo sapiens

<400> 2940

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Glu | Leu | Gln | Glu | Val | Gln | Ile | Thr | Glu | Glu | Lys | Pro | Leu | Leu | 1   | 5   | 10  | 15  |
| Pro | Gly | Gln | Thr | Pro | Glu | Ala | Ala | Lys | Thr | His | Ser | Val | Glu | Thr | Pro | 20  | 25  | 30  |     |
| Tyr | Gly | Ser | Val | Thr | Phe | Thr | Val | Tyr | Gly | Thr | Pro | Lys | Pro | Lys | Arg | 35  | 40  | 45  |     |
| Pro | Ala | Ile | Leu | Thr | Tyr | His | Asp | Val | Gly | Leu | Asn | Tyr | Lys | Ser | Cys | 50  | 55  | 60  |     |
| Phe | Gln | Pro | Leu | Phe | Gln | Phe | Glu | Asp | Met | Gln | Glu | Ile | Ile | Gln | Asn | 65  | 70  | 75  | 80  |
| Phe | Val | Arg | Val | His | Val | Asp | Ala | Pro | Gly | Met | Glu | Glu | Gly | Ala | Pro | 85  | 90  | 95  |     |
| Val | Phe | Pro | Leu | Gly | Tyr | Gln | Tyr | Pro | Ser | Leu | Asp | Gln | Leu | Ala | Asp | 100 | 105 | 110 |     |
| Met | Ile | Pro | Cys | Val | Leu | Gln | Tyr | Leu | Asn | Phe | Ser | Thr | Ile | Ile | Gly | 115 | 120 | 125 |     |
| Val | Gly | Val | Gly | Ala | Gly | Ala | Tyr | Ile | Leu | Ala | Arg | Tyr | Ala | Leu | Asn | 130 | 135 | 140 |     |
| His | Pro | Asp | Thr | Val | Glu | Gly | Leu | Val | Leu | Ile | Asn | Ile | Asp | Pro | Asn | 145 | 150 | 155 | 160 |
| Ala | Lys | Gly | Trp | Met | Asp | Trp | Ala | Ala | His | Lys | Leu | Thr | Gly | Leu | Thr | 165 | 170 | 175 |     |
| Ser | Ser | Ile | Pro | Glu | Met | Ile | Leu | Gly | His | Leu | Phe | Ser | Gln | Glu | Glu | 180 | 185 | 190 |     |
| Leu | Ser | Gly | Asn | Ser | Glu | Leu | Ile | Gln | Lys | Tyr | Arg | Asn | Ile | Ile | Thr | 195 | 200 | 205 |     |
| His | Ala | Pro | Asn | Leu | Asp | Asn | Ile | Glu | Leu | Tyr | Trp | Asn | Ser | Tyr | Asn | 210 | 215 | 220 |     |
| Asn | Arg | Arg | Asp | Leu | Asn | Phe | Glu | Arg | Gly | Gly | Asp | Ile | Thr | Leu | Arg | 225 | 230 | 235 | 240 |
| Cys | Pro | Val | Met | Leu | Val | Val | Gly | Asp | Gln | Ala | Pro | His | Glu | Asp | Ala | 245 | 250 | 255 |     |
| Val | Val | Glu | Cys | Asn | Ser | Lys | Leu | Asp | Pro | Thr | Gln | Thr | Ser | Phe | Leu | 260 | 265 | 270 |     |
| Lys | Met | Ala | Asp | Ser | Gly | Gly | Gln | Pro | Gln | Leu | Thr | Gln | Pro | Gly | Lys |     |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     | 275 |     | 280 |     | 285 |     |     |     |     |     |     |     |     |     |     |
| Leu | Thr | Glu | Ala | Phe | Lys | Tyr | Phe | Leu | Gln | Gly | Met | Gly | Tyr | Met | Ala |
|     | 290 |     |     |     | 295 |     |     |     |     |     | 300 |     |     |     |     |
| Ser | Ser | Cys | Met | Thr | Arg | Leu | Ser | Arg | Ser | Arg | Thr | Ala | Ser | Leu | Thr |
| 305 |     |     |     |     | 310 |     |     |     |     | 315 |     |     |     | 320 |     |
| Ser | Ala | Ala | Ser | Val | Asp | Gly | Asn | Arg | Ser | Arg | Ser | Arg | Thr | Leu | Ser |
|     |     |     | 325 |     |     |     |     | 330 |     |     |     |     | 335 |     |     |
| Gln | Ser | Ser | Glu | Ser | Gly | Thr | Leu | Ser | Ser | Gly | Pro | Pro | Gly | His | Thr |
|     |     |     | 340 |     |     |     | 345 |     |     |     |     |     | 350 |     |     |
| Met | Glu | Val | Ser | Cys |     |     |     |     |     |     |     |     |     |     |     |
|     |     |     | 355 |     |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 2941

&lt;211&gt; 847

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2941

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&lt;210&gt; 2942

&lt;211&gt; 229

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2942

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 20 25 30  
 Gly Arg Gly His Asp His Leu Ala Gly Ala Ser Pro Thr Ala Arg Gln  
 35 40 45  
 His Leu Phe Lys Gln Gly Gln Leu Ser Ala Gln Gly Gly Ala Gln Pro  
 50 55 60  
 Ser Val Glu Ala Pro Ala Ala Pro Arg Pro Thr Ala Thr Gln Leu Thr  
 65 70 75 80  
 Arg Asp Leu Leu Arg Ser Arg Gly Ile Ala Gly Leu Tyr Lys Gly Leu  
 85 90 95  
 Gly Ala Thr Leu Leu Arg Asp Val Pro Phe Ser Val Val Tyr Phe Pro  
 100 105 110  
 Leu Phe Ala Asn Leu Asn Gln Leu Gly Arg Pro Ala Ser Glu Glu Lys  
 115 120 125  
 Ser Pro Phe Tyr Val Ser Phe Leu Ala Gly Cys Val Ala Gly Ser Ala  
 130 135 140  
 Ala Ala Val Ala Val Asn Pro Cys Asp Val Val Lys Thr Arg Leu Gln  
 145 150 155 160  
 Ser Leu Gln Arg Gly Val Asn Glu Asp Thr Tyr Ser Gly Ile Leu Asp  
 165 170 175  
 Cys Ala Arg Lys Ile Leu Arg His Glu Gly Pro Ser Ala Phe Leu Lys  
 180 185 190  
 Gly Ala Tyr Cys Arg Ala Leu Val Ile Ala Pro Leu Phe Gly Ile Ala  
 195 200 205  
 Gln Val Val Tyr Phe Leu Gly Ile Ala Glu Ser Leu Leu Gly Leu Leu  
 210 215 220  
 Gln Asp Pro Gln Ala  
 225

&lt;210&gt; 2943

&lt;211&gt; 1501

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2943

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 a  
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&lt;210&gt; 2944

&lt;211&gt; 218

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2944

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 Lys Lys Ile Ser Arg Leu Asp Ala Glu Leu Val Lys Tyr Lys Asp Gln  
 35 40 45  
 Ile Lys Lys Met Arg Glu Gly Pro Ala Lys Asn Met Val Lys Gln Lys  
 50 55 60  
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<212> PRT

<213> Homo sapiens

<400> 2946

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| Xaa | Arg | Arg | Leu | Ala | Pro | Ser | Ser | Ala | Ser | Glu | Glu | Asn | Gly | Arg | Ser |
| 1   |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Pro | Ala | Val | Gly | Pro | Thr | Val | Ser | Asn | Met | Ser | Gly | Leu | Asp | Gly | Val |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |     |
| Lys | Arg | Thr | Thr | Pro | Leu | Gln | Thr | His | Ser | Ile | Ile | Ile | Ser | Asp | Gln |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Val | Pro | Ser | Asp | Gln | Asp | Ala | His | Gln | Tyr | Leu | Arg | Leu | Arg | Asp | Gln |
|     | 50  |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |     |
| Ser | Glu | Ala | Thr | Gln | Val | Met | Ala | Glu | Pro | Gly | Glu | Gly | Gly | Ser | Glu |
| 65  |     |     |     | 70  |     |     |     | 75  |     |     |     |     |     | 80  |     |
| Thr | Val | Ala | Leu | Pro | Pro | Pro | Pro | Ser | Glu | Glu | Gly | Gly | Val | Pro |     |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Gln | Asp | Ala | Ala | Gly | Arg | Gly | Gly | Thr | Pro | Gln | Ile | Arg | Val | Val | Gly |
|     |     | 100 |     |     |     |     | 105 |     |     |     |     |     | 110 |     |     |
| Gly | Arg | Gly | His | Val | Ala | Ile | Lys | Ala | Gly | Gln | Glu | Glu | Gly | Gln | Pro |
|     |     | 115 |     |     |     | 120 |     |     |     |     |     | 125 |     |     |     |
| Pro | Ala | Glu | Gly | Leu | Ala | Ala | Ala | Ser | Val | Val | Met | Ala | Ala | Asp | Arg |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
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&lt;210&gt; 2948

&lt;211&gt; 332

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2948

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Ala | Ser | Ala | Ala | Val | Pro | Val | Ala | Met | Asn | Arg | Phe | Arg | Val | Ser |
| 1   |     |     | 5   |     |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Lys | Phe | Arg | His | Thr | Glu | Ala | Arg | Pro | Pro | Arg | Arg | Glu | Ser | Trp | Ile |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ser | Asp | Ile | Arg | Ala | Gly | Thr | Ala | Pro | Ser | Cys | Arg | Asn | His | Ile | Lys |
|     | 35  |     |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ser | Ser | Cys | Ser | Leu | Ile | Ala | Phe | Asn | Ser | Asp | Arg | Pro | Gly | Val | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Gly | Ile | Val | Pro | Leu | Gln | Gly | Gln | Gly | Glu | Asp | Lys | Arg | Arg | Val | Ala |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| His | Leu | Gly | Cys | His | Ser | Asp | Leu | Val | Thr | Asp | Leu | Asp | Phe | Ser | Pro |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Phe | Asp | Asp | Phe | Leu | Leu | Ala | Thr | Gly | Ser | Ala | Asp | Arg | Thr | Val | Lys |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Leu | Trp | Arg | Leu | Pro | Gly | Pro | Gly | Gln | Ala | Leu | Pro | Ser | Ala | Pro | Gly |
|     | 115 |     |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Val | Val | Leu | Gly | Pro | Glu | Asp | Leu | Pro | Val | Glu | Val | Leu | Gln | Phe | His |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Pro | Thr | Ser | Asp | Gly | Ile | Leu | Val | Ser | Ala | Ala | Gly | Thr | Thr | Val | Lys |
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| Met | Arg | Pro | Leu | Cys | Val | Thr | Cys | Trp | Trp | Leu | Gly | Leu | Leu | Ala | Ala | 1   | 5   | 10  | 15  |
| Met | Gly | Ala | Val | Ala | Gly | Gln | Glu | Asp | Gly | Phe | Glu | Gly | Thr | Glu | Glu | 20  | 25  | 30  |     |
| Gly | Ser | Pro | Arg | Glu | Phe | Ile | Tyr | Leu | Asn | Arg | Tyr | Lys | Arg | Ala | Gly | 35  | 40  | 45  |     |
| Glu | Ser | Gln | Asp | Lys | Cys | Thr | Tyr | Thr | Phe | Ile | Val | Pro | Gln | Gln | Arg | 50  | 55  | 60  |     |
| Val | Thr | Gly | Ala | Ile | Cys | Val | Asn | Ser | Lys | Glu | Pro | Glu | Val | Leu | Leu | 65  | 70  | 75  | 80  |
| Glu | Asn | Arg | Val | His | Lys | Gln | Glu | Leu | Glu | Leu | Leu | Asn | Asn | Glu | Leu | 85  | 90  | 95  |     |
| Leu | Lys | Gln | Lys | Arg | Gln | Ile | Glu | Thr | Leu | Gln | Gln | Leu | Val | Glu | Val | 100 | 105 | 110 |     |
| Asp | Gly | Gly | Ile | Val | Ser | Glu | Val | Lys | Leu | Leu | Arg | Lys | Glu | Ser | Arg | 115 | 120 | 125 |     |
| Asn | Met | Asn | Ser | Arg | Val | Thr | Gln | Leu | Tyr | Met | Gln | Leu | Leu | His | Glu | 130 | 135 | 140 |     |
| Ile | Ile | Arg | Lys | Arg | Asp | Asn | Ala | Leu | Glu | Leu | Ser | Gln | Leu | Glu | Asn | 145 | 150 | 155 | 160 |
| Arg | Ile | Leu | Asn | Gln | Thr | Ala | Asp | Met | Leu | Gln | Leu | Ala | Ser | Lys | Tyr | 165 | 170 | 175 |     |
| Lys | Asp | Leu | Glu | His | Lys | Phe | Gln | His | Leu | Ala | Met | Leu | Ala | His | Asn | 180 | 185 | 190 |     |
| Gln | Ser | Glu | Ile | Ile | Ala | Gln | Leu | Glu | Glu | His | Cys | Gln | Arg | Val | Pro | 195 | 200 | 205 |     |
| Ser | Ala | Arg | Pro | Val | Pro | Gln | Pro | Pro | Pro | Ala | Ala | Pro | Pro | Arg | Val | 210 | 215 | 220 |     |
| Tyr | Gln | Pro | Pro | Thr | Tyr | Asn | Arg | Ile | Ile | Asn | Gln | Ile | Ser | Thr | Asn | 225 | 230 | 235 | 240 |
| Glu | Ile | Gln | Ser | Asp | Gln | Asn | Leu | Lys | Val | Leu | Pro | Pro | Pro | Leu | Pro | 245 | 250 | 255 |     |
| Thr | Met | Pro | Thr | Leu | Thr | Ser | Leu | Pro | Ser | Ser | Thr | Asp | Lys | Pro | Ser | 260 | 265 | 270 |     |
| Gly | Pro | Trp | Arg | Asp | Cys | Leu | Gln | Ala | Leu | Glu | Asp | Gly | His | Asp | Thr | 275 | 280 | 285 |     |
| Ser | Ser | Ile | Tyr | Leu | Val | Lys | Pro | Glu | Asn | Thr | Asn | Arg | Leu | Met | Gln | 290 | 295 | 300 |     |
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&lt;212&gt; PRT

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&lt;400&gt; 2954

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&lt;211&gt; 1047

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2958

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| Met | Ala | Val | Thr | Leu | Asp | Lys | Asp | Ala | Tyr | Tyr | Arg | Arg | Val | Lys | Arg |
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| Leu | Tyr | Ser | Asn | Trp | Arg | Lys | Gly | Glu | Asp | Glu | Tyr | Ala | Asn | Val | Asp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ala | Ile | Val | Val | Ser | Val | Gly | Val | Asp | Glu | Glu | Ile | Val | Tyr | Ala | Lys |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ser | Thr | Ala | Leu | Gln | Thr | Trp | Leu | Phe | Gly | Tyr | Glu | Leu | Thr | Asp | Thr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Ile | Met | Val | Phe | Cys | Asp | Asp | Lys | Ile | Ile | Phe | Met | Ala | Ser | Lys | Lys |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Lys | Val | Glu | Phe | Leu | Lys | Gln | Ile | Ala | Asn | Thr | Lys | Gly | Asn | Glu | Asn |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ala | Asn | Gly | Ala | Pro | Ala | Ile | Thr | Leu | Leu | Ile | Arg | Glu | Lys | Asn | Glu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Ser | Asn | Lys | Ser | Ser | Phe | Asp | Lys | Met | Ile | Glu | Ala | Ile | Lys | Glu | Ser |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Lys | Asn | Gly | Lys | Lys | Ile | Gly | Val | Phe | Ser | Lys | Asp | Lys | Phe | Pro | Gly |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Glu | Phe | Met | Lys | Ser | Trp | Asn | Asp | Cys | Leu | Asn | Lys | Glu | Gly | Phe | Asp |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Lys | Ile | Asp | Ile | Ser | Ala | Val | Val | Ala | Tyr | Thr | Ile | Ala | Val | Lys | Glu |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Asp | Gly | Glu | Leu | Asn | Leu | Met | Lys | Lys | Ala | Ala | Ser | Ile | Thr | Ser | Glu |
|     |     |     | 180 |     |     |     |     |     | 185 |     |     |     | 190 |     |     |
| Val | Phe | Asn | Lys | Phe | Phe | Lys | Glu | Arg | Val | Met | Glu | Ile | Val | Asp | Ala |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
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|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Ile | Glu | Glu | Lys | Lys | Tyr | Leu | Ala | Gly | Ala | Asp | Pro | Ser | Thr | Val | Glu |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |
| Met | Cys | Tyr | Pro | Pro | Ile | Ile | Gln | Ser | Gly | Gly | Asn | Tyr | Asn | Leu | Lys |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Phe | Ser | Val | Val | Ser | Asp | Lys | Asn | His | Met | His | Phe | Gly | Ala | Ile | Thr |
|     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |     |     |
| Cys | Ala | Met | Gly | Ile | Arg | Phe | Lys | Ser | Tyr | Cys | Ser | Asn | Leu | Val | Arg |
|     | 275 |     |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |
| Thr | Leu | Met | Val | Asp | Pro | Ser | Gln | Glu | Val | Gln | Glu | Asn | Tyr | Asn | Phe |
|     | 290 |     |     |     |     | 295 |     |     |     |     | 300 |     |     |     |     |
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| Lys | Ile | Cys | Asp | Val | Tyr | Asn | Ala | Val | Met | Asp | Val | Val | Lys | Lys | Gln |
|     |     |     | 325 |     |     |     |     |     | 330 |     |     |     |     | 335 |     |
| Lys | Pro | Glu | Leu | Leu | Asn | Lys | Ile | Thr | Lys | Asn | Leu | Gly | Phe | Gly | Met |
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| Gly | Ile | Glu | Phe | Arg | Glu | Gly | Ser | Leu | Val | Ile | Asn | Ser | Lys | Asn | Gln |
|     | 355 |     |     |     |     | 360 |     |     |     |     | 365 |     |     |     |     |
| Tyr | Lys | Leu | Lys | Lys | Gly | Met | Val | Phe | Ser | Ile | Asn | Leu | Gly | Phe | Ser |
|     | 370 |     |     |     | 375 |     |     |     |     |     | 380 |     |     |     |     |
| Asp | Leu | Thr | Asn | Lys | Glu | Gly | Lys | Lys | Pro | Glu | Glu | Lys | Thr | Tyr | Ala |
| 385 |     |     |     |     | 390 |     |     |     |     | 395 |     |     |     |     | 400 |
| Leu | Phe | Ile | Gly | Asp | Thr | Val | Leu | Val | Asp | Glu | Asp | Gly | Pro | Ala | Thr |
|     |     |     | 405 |     |     |     |     |     | 410 |     |     |     |     | 415 |     |
| Val | Leu | Thr | Ser | Val | Lys | Lys | Lys | Val | Lys | Asn | Val | Gly | Ile | Phe | Leu |
|     |     |     | 420 |     |     |     |     | 425 |     |     |     |     | 430 |     |     |
| Lys | Asn | Glu | Asp | Glu | Glu | Glu | Glu | Glu | Glu | Glu | Lys | Asp | Glu | Ala | Glu |
|     | 435 |     |     |     |     | 440 |     |     |     |     |     | 445 |     |     |     |
| Asp | Leu | Leu | Gly | Arg | Gly | Ser | Arg | Ala | Ala | Leu | Leu | Thr | Glu | Arg | Thr |
|     | 450 |     |     |     | 455 |     |     |     |     |     | 460 |     |     |     |     |
| Arg | Asn | Glu | Met | Thr | Ala | Glu | Glu | Lys | Arg | Arg | Ala | His | Gln | Lys | Glu |
| 465 |     |     |     |     | 470 |     |     |     |     | 475 |     |     |     |     | 480 |
| Leu | Ala | Ala | Gln | Leu | Asn | Glu | Glu | Ala | Lys | Arg | Arg | Leu | Thr | Glu | Gln |
|     |     |     | 485 |     |     |     |     | 490 |     |     |     |     | 495 |     |     |
| Lys | Gly | Glu | Gln | Gln | Ile | Gln | Lys | Ala | Arg | Lys | Ser | Asn | Val | Ser | Tyr |

2191

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&lt;210&gt; 2960

&lt;211&gt; 868

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2960

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Thr | Phe | Ile | Ser | Val | Gln | Leu | Lys | Lys | Thr | Ser | Glu | Val | Asp |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Leu | Ala | Lys | Pro | Leu | Val | Lys | Phe | Ile | Gln | Gln | Thr | Tyr | Pro | Ser | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gly | Glu | Glu | Gln | Ala | Gln | Tyr | Cys | Arg | Ala | Ala | Glu | Glu | Leu | Ser | Lys |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Leu | Arg | Arg | Ala | Ala | Val | Gly | Arg | Pro | Leu | Asp | Lys | His | Glu | Gly | Ala |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Leu | Glu | Thr | Leu | Leu | Arg | Tyr | Tyr | Asp | Gln | Ile | Cys | Ser | Ile | Glu | Pro |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Lys | Phe | Pro | Phe | Ser | Glu | Asn | Gln | Ile | Cys | Leu | Thr | Phe | Thr | Trp | Lys |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Asp | Ala | Phe | Asp | Lys | Gly | Ser | Leu | Phe | Gly | Gly | Ser | Val | Lys | Leu | Ala |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Leu | Ala | Ser | Leu | Gly | Tyr | Glu | Lys | Ser | Cys | Val | Leu | Phe | Asn | Cys | Ala |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Ala | Leu | Ala | Ser | Gln | Ile | Ala | Ala | Glu | Gln | Asn | Leu | Asp | Asn | Asp | Glu |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Gly | Leu | Lys | Ile | Ala | Ala | Lys | His | Tyr | Gln | Phe | Ala | Ser | Gly | Ala | Phe |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Leu | His | Ile | Lys | Glu | Thr | Val | Leu | Ser | Ala | Leu | Ser | Arg | Glu | Pro | Thr |

2195

|                 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 595             |     |     |     | 600 |     |     |     | 605 |     |     |     |     |     |     |     |
| Gly             | Gly | Leu | Thr | Thr | Lys | Val | Gln | Glu | Ser | Leu | Lys | Lys | Gln | Glu | Gly |
| 610             |     |     |     | 615 |     |     |     | 620 |     |     |     |     |     |     |     |
| Leu             | Leu | Lys | Asn | Ile | Gln | Val | Ser | His | Gln | Glu | Phe | Ser | Lys | Met | Lys |
| 625             |     |     |     | 630 |     |     |     | 635 |     |     |     | 640 |     |     |     |
| Gln             | Ser | Asn | Asn | Glu | Ala | Asn | Leu | Arg | Glu | Glu | Val | Leu | Lys | Asn | Leu |
| 645             |     |     |     | 650 |     |     |     | 655 |     |     |     |     |     |     |     |
| Ala             | Thr | Ala | Tyr | Asp | Asn | Phe | Val | Glu | Leu | Val | Ala | Asn | Leu | Lys | Glu |
| 660             |     |     |     | 665 |     |     |     | 670 |     |     |     |     |     |     |     |
| Gly             | Thr | Lys | Phe | Tyr | Asn | Glu | Leu | Thr | Glu | Ile | Leu | Val | Arg | Phe | Gln |
| 675             |     |     |     | 680 |     |     |     | 685 |     |     |     |     |     |     |     |
| Asn             | Lys | Cys | Ser | Asp | Ile | Val | Phe | Ala | Arg | Lys | Thr | Glu | Arg | Asp | Glu |
| 690             |     |     |     | 695 |     |     |     | 700 |     |     |     |     |     |     |     |
| Leu             | Leu | Lys | Asp | Leu | Gln | Gln | Ser | Ile | Ala | Arg | Glu | Pro | Ser | Ala | Pro |
| 705             |     |     |     | 710 |     |     |     | 715 |     |     |     | 720 |     |     |     |
| Ser             | Ile | Pro | Thr | Pro | Ala | Tyr | Gln | Ser | Leu | Pro | Ala | Gly | Gly | His | Ala |
| 725             |     |     |     | 730 |     |     |     | 735 |     |     |     |     |     |     |     |
| Pro             | Thr | Pro | Pro | Thr | Pro | Ala | Pro | Arg | Thr | Met | Pro | Pro | Thr | Lys | Pro |
| 740             |     |     |     | 745 |     |     |     | 750 |     |     |     |     |     |     |     |
| Gln             | Pro | Pro | Ala | Arg | Pro | Pro | Pro | Pro | Val | Leu | Pro | Ala | Asn | Arg | Ala |
| 755             |     |     |     | 760 |     |     |     | 765 |     |     |     |     |     |     |     |
| Pro             | Ser | Ala | Thr | Ala | Pro | Ser | Pro | Val | Gly | Ala | Gly | Thr | Ala | Ala | Pro |
| 770             |     |     |     | 775 |     |     |     | 780 |     |     |     |     |     |     |     |
| Ala             | Pro | Ser | Gln | Thr | Pro | Gly | Ser | Ala | Pro | Pro | Pro | Gln | Ala | Gln | Gly |
| 785             |     |     |     | 790 |     |     |     | 795 |     |     |     | 800 |     |     |     |
| Pro             | Pro | Tyr | Pro | Thr | Tyr | Pro | Gly | Tyr | Pro | Gly | Tyr | Cys | Gln | Met | Pro |
| 805             |     |     |     | 810 |     |     |     | 815 |     |     |     |     |     |     |     |
| Met             | Pro | Met | Gly | Tyr | Asn | Pro | Tyr | Ala | Tyr | Gly | Gln | Tyr | Asn | Met | Pro |
| 820             |     |     |     | 825 |     |     |     | 830 |     |     |     |     |     |     |     |
| Tyr             | Pro | Pro | Val | Tyr | His | Gln | Ser | Pro | Gly | Gln | Ala | Pro | Tyr | Pro | Gly |
| 835             |     |     |     | 840 |     |     |     | 845 |     |     |     |     |     |     |     |
| Pro             | Gln | Gln | Pro | Ser | Tyr | Pro | Phe | Pro | Gln | Pro | Pro | Gln | Gln | Ser | Tyr |
| 850             |     |     |     | 855 |     |     |     | 860 |     |     |     |     |     |     |     |
| Tyr Pro Gln Gln |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 865             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 2961

&lt;211&gt; 434

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2961

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240

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 420  
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&lt;213&gt; Homo sapiens

&lt;400&gt; 2964

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 35 40 45  
 Gly Gly Pro Gly Arg Val Trp Gly Thr Ser Leu His Val Val Gly Leu  
 50 55 60  
 Leu Met Val His Glu Trp Val Val Val Lys Gly Ala Val Trp Ala Gly  
 65 70 75 80  
 Pro Leu Pro Gln Ala Trp Pro Pro Asp Thr Pro Phe Pro Ala Asp Val  
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 Asp Glu Cys Ser Asp Arg Arg Gly Gly Cys Pro Gln Arg Cys Val His  
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 Pro Ala Gly  
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&lt;210&gt; 2965

&lt;211&gt; 3739

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2965

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&lt;210&gt; 2966

&lt;211&gt; 386

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2966

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Tyr | Gly | Glu | Cys | Arg | Thr | Tyr | Ile | Ile | His | Tyr | Tyr | Leu | Met | Asp |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |
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<212> DNA
<213> Homo sapiens

<400> 2967
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&lt;210&gt; 2968

&lt;211&gt; 126

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2968

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ala | Gly | Gly | Arg | Arg | Ser | Arg | Leu | Ser | Arg | Ser | Trp | Pro | Thr |
| 1   |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Gly | Pro | Ser | Lys | Ser | Pro | Ser | Gly | Val | Arg | Cys | Cys | Gly | Ala | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |
| Trp | Glu | Asp | Lys | Asp | Glu | Phe | Leu | Asp | Val | Ile | Tyr | Trp | Phe | Arg |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |
| Ile | Ile | Ala | Val | Val | Leu | Gly | Val | Ile | Trp | Gly | Val | Leu | Pro | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |
| Gly | Phe | Leu | Gly | Ile | Ala | Gly | Phe | Cys | Leu | Ile | Asn | Ala | Gly | Val |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65  |     | 70  |     | 75  |     | 80  |     |     |     |     |     |     |     |     |     |
| Tyr | Leu | Tyr | Phe | Ser | Asn | Tyr | Leu | Gln | Ile | Asp | Glu | Glu | Glu | Tyr | Gly |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Gly | Thr | Trp | Glu | Leu | Thr | Lys | Glu | Gly | Phe | Met | Thr | Ser | Phe | Ala | Xaa |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     |     | 110 |     |
| Val | His | Gly | His | Leu | Asp | His | Leu | Leu | His | Cys | His | Pro | Leu |     |     |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |

&lt;210&gt; 2969

&lt;211&gt; 667

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2969

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&lt;210&gt; 2970

&lt;211&gt; 92

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2970

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Ser | Ala | Leu | Gly | Asp | Gln | Ser | Lys | Lys | Val | Val | His | Val | Pro | Tyr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Arg | Asp | Ser | Lys | Leu | Thr | Arg | Leu | Leu | Gln | Asp | Ser | Leu | Gly | Asn |     |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ser | Gln | Thr | Ile | Met | Ile | Ala | Trp | Gly | Ser | Pro | Ser | Asn | Arg | Asp | Phe |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |
| Met | Glu | Thr | Leu | Asn | Thr | Leu | Lys | Tyr | Ala | Asn | Arg | Ala | Arg | Asn | Ile |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Lys | Asn | Lys | Val | Val | Val | Asn | Gln | Asp | Lys | Thr | Ala | Ser | Lys | Ser | Met |

80

2204

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&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2972

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 Pro Asp Pro Ser Pro Gly Tyr Ser Ser Leu Lys Ala Met Arg Pro His  
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<210> 2974

<211> 117

<212> PRT

<213> Homo sapiens

<400> 2974

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| Gly | Tyr | Phe | Trp | Phe | Met | Gly | Arg | Thr | Asp | Asp | Val | Ile | Asn | Ser | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ser | Tyr | Arg | Ile | Gly | Pro | Val | Glu | Val | Glu | Ser | Ala | Leu | Ala | Glu | His |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Pro | Ala | Val | Leu | Glu | Ser | Ala | Val | Val | Ser | Ser | Pro | Asp | Pro | Ile | Arg |
|     |     | 35  |     |     |     |     | 40  |     |     |     | 45  |     |     |     |     |
| Gly | Glu | Val | Val | Lys | Ala | Phe | Ile | Val | Leu | Thr | Pro | Ala | Tyr | Ser | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| His | Asp | Pro | Glu | Ala | Leu | Thr | Arg | Glu | Leu | Gln | Glu | His | Val | Lys | Arg |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |
| Val | Thr | Ala | Pro | Tyr | Lys | Thr | Pro | Arg | Lys | Val | Ala | Phe | Val | Ser | Glu |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Leu | Pro | Lys | Thr | Val | Ser | Gly | Lys | Ile | Gln | Arg | Ser | Lys | Leu | Arg | Ser |
|     |     |     | 100 |     |     |     | 105 |     |     |     |     |     | 110 |     |     |
| Gln | Glu | Trp | Gly | Lys |     |     |     |     |     |     |     |     |     |     |     |
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<211> 1425

<212> DNA

<213> Homo sapiens

<400> 2975

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&lt;210&gt; 2976

&lt;211&gt; 328

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2976

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ser | Thr | Thr | Gly | Thr | Gln | Glu | Leu | Lys | Pro | Gly | Leu | Glu | Gly | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Leu | Gly | Val | Gly | Asp | Thr | Met | Tyr | Thr | Val | Asn | Gly | Val | His | Pro | Leu |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Thr | Leu | Arg | Trp | Glu | Glu | Thr | Arg | Thr | Pro | Glu | Ser | Gln | Pro | Asp | Thr |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Pro | Pro | Gly | Thr | Pro | Leu | Val | Ser | Gln | Asp | Glu | Lys | Arg | Asp | Ala | Glu |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Leu | Pro | Lys | Lys | Arg | Met | Gly | Lys | Ser | Asn | Pro | Gly | Trp | Glu | Asn | Leu |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |     |
| Glu | Lys | Leu | Leu | Val | Phe | Thr | Ala | Ala | Gly | Val | Lys | Pro | Gly | Xaa | Lys |

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<210> 2977
<211> 1420
<212> DNA
<213> Homo sapiens
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 1420

&lt;210&gt; 2978

&lt;211&gt; 369

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2978

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Ser | Asn | Ile | His | Ala | Glu | Tyr | Arg | Met | Val | Val | Gly | Gly | Ala | Gln |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ala | Gly | Asp | Ala | Gly | Thr | Tyr | His | Cys | Thr | Ala | Ala | Glu | Trp | Ile | Gln |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Asp | Pro | Asp | Gly | Ser | Trp | Ala | Gln | Ile | Ala | Glu | Lys | Arg | Ala | Val | Leu |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ala | His | Val | Asp | Val | Gln | Thr | Leu | Ser | Ser | Gln | Leu | Ala | Val | Thr | Val |
|     |     |     | 50  |     |     |     | 55  |     |     |     | 60  |     |     |     |     |
| Gly | Pro | Gly | Glu | Arg | Arg | Ile | Gly | Pro | Gly | Glu | Pro | Leu | Glu | Leu | Leu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Cys | Asn | Val | Ser | Gly | Ala | Leu | Pro | Pro | Ala | Gly | Arg | His | Ala | Ala | Tyr |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ser | Val | Gly | Trp | Glu | Met | Ala | Pro | Ala | Gly | Ala | Pro | Gly | Pro | Gly | Arg |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Leu | Val | Ala | Gln | Leu | Asp | Thr | Glu | Gly | Val | Gly | Ser | Leu | Xaa | Ala | Leu |

115 120 125  
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 145 150 155 160  
 Arg Cys Leu Ala Lys Ala Tyr Val Arg Gly Ser Gly Thr Arg Leu Arg  
 165 170 175  
 Glu Ala Ala Ser Ala Arg Ser Arg Pro Leu Pro Val His Val Arg Glu  
 180 185 190  
 Glu Gly Val Val Leu Glu Ala Val Ala Trp Leu Ala Gly Gly Thr Val  
 195 200 205  
 Tyr Arg Gly Glu Thr Ala Ser Leu Leu Cys Asn Ile Ser Val Arg Gly  
 210 215 220  
 Gly Pro Pro Gly Leu Arg Leu Ala Ala Ser Trp Trp Val Glu Arg Pro  
 225 230 235 240  
 Glu Asp Gly Glu Leu Ser Ser Val Pro Ala Gln Leu Val Gly Gly Val  
 245 250 255  
 Gly Gln Asp Gly Val Ala Glu Leu Gly Val Arg Pro Gly Gly Gly Pro  
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 Val Ser Val Glu Leu Val Gly Pro Arg Ser His Arg Leu Arg Leu His  
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 305 310 315 320  
 Ser Gly Pro Val Thr Val Tyr Pro Tyr Met His Ala Leu Asp Thr Leu  
 325 330 335  
 Phe Val Pro Leu Leu Val Gly Thr Gly Val Ala Leu Val Thr Gly Ala  
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&lt;210&gt; 2979

&lt;211&gt; 2191

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 2979

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<210> 2980

<211> 140

<212> PRT

<213> Homo sapiens

<400> 2980

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| Met | Gly | Thr | Gly | His | Arg | Ala | Arg | Ala | Tyr | Asn | Gly | Tyr | Ala | Thr | Trp |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Leu | Leu | Val | Gly | Pro | Leu | Gln | Pro | Val | Gly | Lys | Pro | Ala | Arg | Leu | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gly | Thr | Glu | His | Gly | Gln | Pro | Phe | Ala | Arg | Gly | Trp | Gly | Ala | Trp | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Asn | Ala | Arg | Arg | Ala | Arg | Val | Gly | Arg | Ala | Glu | Cys | Leu | Leu | Ser | Gly |
|     |     | 50  |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Arg | Pro | Pro | Thr | Ala | Val | Leu | Pro | Arg | Leu | Val | Glu | Asn | Leu | Lys | Ala |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Arg | Val | Pro | Val | Pro | Gly | His | Thr | Glu | Pro | Leu | Trp | Ser | Glu | Gly | Thr |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ala | Pro | Gly | Gln | Gly | Leu | Trp | Ser | His | Ala | Pro | Ala | Asp | Gly | Ser | Leu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Met | Asn | Leu | Ile | Arg | Thr | Leu | Val | Gly | Ala | Val | Val | Phe | Glu | Leu | Leu |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Ser | Met | Cys | Phe | Gly | Asp | Gly | Ala | Gly | Ala | Ala | Cys |     |     |     |     |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |

<210> 2981

<211> 617

<212> DNA

<213> Homo sapiens

<400> 2981

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<210> 2982  
 <211> 107  
 <212> PRT  
 <213> Homo sapiens

<400> 2982  
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 35 40 45  
 Leu Pro Glu Gln Glu Ala Ala Glu Ala Asp Leu Ser Asn Met Glu Arg  
 50 55 60  
 Val Ser Leu Ser Thr Ala Asp Pro Gln Gly Val Thr Tyr Ala Glu Leu  
 65 70 75 80  
 Ser Thr Ser Ala Leu Ser Glu Ala Ala Ser Asp Thr Thr Gln Glu Pro  
 85 90 95  
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<210> 2983  
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 <212> DNA  
 <213> Homo sapiens

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<210> 2984  
<211> 204  
<212> PRT  
<213> Homo sapiens

<400> 2984  
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Gly Ala Gly Arg Val Gly Lys Ser Ala Met Ile Val Arg Phe Leu Thr  
35 40 45  
Lys Arg Phe Ile Gly Asp Tyr Glu Pro Asn Thr Gly Lys Leu Tyr Ser  
50 55 60  
Arg Leu Val Tyr Val Glu Gly Asp Gln Leu Ser Leu Gln Ile Gln Asp  
65 70 75 80  
Thr Pro Gly Gly Val Gln Ile Gln Asp Ser Leu Pro Gln Val Val Asp  
85 90 95  
Ser Leu Gln Met Arg Ala Val Ala Glu Gly Phe Leu Leu Val Tyr Ser  
100 105 110  
Ile Thr Asp Tyr Asp Ser Tyr Leu Ser Ile Arg Pro Leu Tyr Gln His  
115 120 125  
Ile Arg Lys Val His Pro Asp Ser Lys Ala Pro Val Ile Ile Val Gly  
130 135 140  
Asn Lys Gly Asp Leu Leu His Ala Arg Gln Val Gln Thr Gln Asp Gly  
145 150 155 160  
Ile Gln Leu Ala Asn Glu Leu Gly Ser Leu Phe Leu Glu Ile Ser Thr  
165 170 175  
Ser Glu Asn Tyr Glu Asp Val Cys Asp Val Phe Gln His Leu Cys Lys  
180 185 190  
Glu Val Ser Lys Met His Gly Leu Ser Gly Glu Arg  
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<210> 2985  
<211> 4547  
<212> DNA  
<213> Homo sapiens

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&lt;211&gt; 988

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&lt;213&gt; Homo sapiens

&lt;400&gt; 2986

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
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| Gln | Glu | Val | Phe | Lys | Pro | Glu | Asn | Ile | Ser | Leu | Arg | Asn | Lys | Leu | Arg |
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| Glu | Leu | Cys | Val | Lys | Leu | Met | Phe | Leu | His | Pro | Val | Asp | Tyr | Gly | Arg |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Lys | Ala | Glu | Glu | Leu | Leu | Trp | Arg | Lys | Val | Tyr | Tyr | Glu | Val | Ile | Gln |
|     |     |     | 50  |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Leu | Ile | Lys | Thr | Asn | Lys | Lys | His | Ile | His | Ser | Arg | Ser | Thr | Leu | Glu |
| 65  |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     | 80  |     |
| Cys | Ala | Tyr | Arg | Thr | His | Leu | Val | Ala | Gly | Ile | Gly | Phe | Tyr | Gln | His |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Leu | Leu | Leu | Tyr | Ile | Gln | Ser | His | Tyr | Gln | Leu | Glu | Leu | Gln | Cys | Cys |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Ile | Asp | Trp | Thr | His | Val | Thr | Asp | Pro | Leu | Ile | Gly | Cys | Lys | Lys | Pro |

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|     |     |     | 580 |     |     |     |     | 585 |     |     |     |     | 590 |     |     |
| Glu | Glu | Gly | Ser | Glu | Ser | Glu | Gly | Ser | Glu | Ser | Ser | Gly | Arg | Ser | Cys |
|     |     | 595 |     |     |     |     | 600 |     |     |     |     | 605 |     |     |     |
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|     | 610 |     |     |     |     | 615 |     |     |     |     | 620 |     |     |     |     |
| Gly | Leu | Leu | Pro | Ala | Val | Lys | Val | Phe | Leu | Asp | Trp | Leu | Arg | Thr | Asn |
|     | 625 |     |     |     | 630 |     |     |     |     | 635 |     |     |     |     | 640 |
| Pro | Asp | Leu | Ile | Ile | Val | Cys | Ala | Gln | Ser | Ser | Gln | Ser | Leu | Trp | Asn |
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| Arg | Leu | Ser | Val | Leu | Leu | Asn | Leu | Leu | Pro | Ala | Ala | Gly | Glu | Leu | Gln |
|     |     |     | 660 |     |     |     |     | 665 |     |     |     |     | 670 |     |     |
| Glu | Ser | Gly | Leu | Ala | Leu | Cys | Pro | Glu | Val | Gln | Asp | Leu | Leu | Glu | Gly |
|     |     | 675 |     |     |     |     | 680 |     |     |     | 685 |     |     |     |     |
| Cys | Glu | Leu | Pro | Asp | Leu | Pro | Ser | Ser | Leu | Leu | Leu | Pro | Glu | Asp | Met |
|     | 690 |     |     |     |     | 695 |     |     |     |     | 700 |     |     |     |     |
| Ala | Leu | Arg | Asn | Leu | Pro | Leu | Arg | Ala | Ala | His | Arg | Arg | Phe | Asn |     |
|     | 705 |     |     |     | 710 |     |     |     |     | 715 |     |     |     | 720 |     |
| Phe | Asp | Thr | Asp | Arg | Pro | Leu | Leu | Ser | Thr | Leu | Glu | Glu | Ser | Val | Val |
|     |     |     | 725 |     |     |     |     | 730 |     |     |     |     |     | 735 |     |
| Arg | Ile | Cys | Cys | Ile | Arg | Ser | Phe | Gly | His | Phe | Ile | Ala | Arg | Leu | Gln |
|     |     |     | 740 |     |     |     |     | 745 |     |     |     |     | 750 |     |     |
| Gly | Ser | Ile | Leu | Gln | Phe | Asn | Pro | Glu | Val | Gly | Ile | Phe | Val | Ser | Ile |
|     |     | 755 |     |     |     |     | 760 |     |     |     |     | 765 |     |     |     |
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|     | 770 |     |     |     |     | 775 |     |     |     |     | 780 |     |     |     |     |
| Arg | Met | Ala | Gln | Glu | Glu | Ala | Arg | Arg | Asn | Arg | Leu | Met | Arg | Asp | Met |
|     | 785 |     |     |     |     | 790 |     |     |     | 795 |     |     |     |     | 800 |
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| Gln | Gln | Pro | Lys | Ala | Gln | Ser | Ala | Met | Ser | Pro | Tyr | Leu | Val | Pro | Asp |
|     |     |     | 820 |     |     |     |     | 825 |     |     |     |     | 830 |     |     |
| Thr | Gln | Ala | Leu | Cys | His | His | Leu | Pro | Val | Ile | Arg | Gln | Leu | Ala | Thr |
|     |     | 835 |     |     |     |     | 840 |     |     |     |     | 845 |     |     |     |
| Ser | Gly | Arg | Phe | Ile | Val | Ile | Ile | Pro | Arg | Thr | Val | Ile | Asp | Gly | Leu |
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| Asp | Leu | Leu | Lys | Lys | Glu | His | Pro | Gly | Ala | Arg | Asp | Gly | Ile | Arg | Tyr |
|     | 865 |     |     |     | 870 |     |     |     |     | 875 |     |     |     |     | 880 |
| Leu | Glu | Ala | Glu | Phe | Lys | Lys | Gly | Asn | Arg | Tyr | Ile | Arg | Cys | Gln | Lys |
|     |     |     | 885 |     |     |     |     | 890 |     |     |     |     |     | 895 |     |
| Glu | Val | Gly | Lys | Ser | Phe | Glu | Arg | His | Lys | Leu | Lys | Arg | Gln | Asp | Ala |
|     |     |     | 900 |     |     |     |     | 905 |     |     |     |     | 910 |     |     |
| Asp | Ala | Trp | Thr | Leu | Tyr | Lys | Ile | Leu | Asp | Ser | Cys | Lys | Gln | Leu | Thr |
|     |     | 915 |     |     |     |     | 920 |     |     |     |     | 925 |     |     |     |
| Leu | Ala | Gln | Gly | Ala | Gly | Glu | Glu | Asp | Pro | Ser | Gly | Met | Val | Thr | Ile |
|     | 930 |     |     |     |     | 935 |     |     |     |     | 940 |     |     |     |     |
| Ile | Thr | Gly | Leu | Pro | Leu | Asp | Asn | Pro | Ser | Val | Leu | Ser | Gly | Pro | Met |
|     | 945 |     |     |     | 950 |     |     |     |     | 955 |     |     |     |     | 960 |
| Gln | Ala | Ala | Leu | Gln | Ala | Ala | Ala | His | Ala | Ser | Val | Asp | Ile | Lys | Asn |
|     |     |     | 965 |     |     |     |     | 970 |     |     |     |     |     | 975 |     |
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2225



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 Asp Val Met Leu Glu Thr Tyr Ser Ser Leu Val Ser Leu Gly His Cys  
 50 55 60  
 Ile Thr Lys Pro Glu Met Ile Phe Lys Leu Glu Gln Gly Ala Glu Pro  
 65 70 75 80  
 Trp Ile Val Glu Glu Thr Leu Asn Leu Arg Leu Ser Gly Gly Ser Lys  
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| Val | Val | Ala | Val | Cys | Ser | Pro | Gln | Ser | Ala | Ala | Ala | Asp | Val | Thr | Arg |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |
| His | Thr | Gly | Pro | Phe | Thr | Glu | Val | Ser | Pro | Gly | Ala | Leu | Gly | Trp | Pro |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     | 30  |     |     |     |
| Val | Leu | Cys | Ser | Gly | Leu | Leu | Leu | Gly | Gly | Leu | Gly | Ala | Ala | His | Phe |
|     |     | 35  |     |     |     |     | 40  |     |     |     | 45  |     |     |     |     |
| Ala | Ser | Ala | Val | Ser | Gly | His | Ser | Ser | Ala | Ser | Leu | Gln | Ala | Ala | Ser |
|     | 50  |     |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |

<210> 2993

<211> 687

<212> DNA

<213> Homo sapiens

<400> 2993

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 120  
 cgatacctca agtttgacat cgagattgga cgtggctcct tcaagacggt gtatcgaggg  
 180  
 ctagacaccg acaccacagt ggaggtggcc tgggtgtgagc tgcagactcg gaaactgtct  
 240  
 agagctgagc ggcagcgctt ctgagaggag gtggagatgc tcaaggggct gcagcacccc  
 300  
 aacatcgtcc gcttctatga ttcgtggaag tcggtgctga ggggccagggt ttgcatcgtg  
 360  
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 420  
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 480  
 cactccccggg ttcctcccat cctgcaccgg gatctcaagt gcgacaatgt ctttatcacg  
 540  
 ggacctactg gctctgtcaa aatcggggac ctgggcctgg ccacgctcaa gcgcgcctcc  
 600  
 tttgccaaga gtgtcatcgg gaccccgaa ttcattggccc ccgagatgta cgaggaaaag  
 660

tacgatgagg ccgtggacgt gtacgcg  
687

<210> 2994  
<211> 229  
<212> PRT  
<213> Homo sapiens

<400> 2994  
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1 5 10 15  
Leu Glu Arg Arg Arg Glu Gln Glu Glu Lys Glu Asp Met Glu Thr Gln  
20 25 30  
Ala Val Ala Thr Ser Pro Asp Gly Arg Tyr Leu Lys Phe Asp Ile Glu  
35 40 45  
Ile Gly Arg Gly Ser Phe Lys Thr Val Tyr Arg Gly Leu Asp Thr Asp  
50 55 60  
Thr Thr Val Glu Val Ala Trp Cys Glu Leu Gln Thr Arg Lys Leu Ser  
65 70 75 80  
Arg Ala Glu Arg Gln Arg Phe Ser Glu Glu Val Glu Met Leu Lys Gly  
85 90 95  
Leu Gln His Pro Asn Ile Val Arg Phe Tyr Asp Ser Trp Lys Ser Val  
100 105 110  
Leu Arg Gly Gln Val Cys Ile Val Leu Val Thr Glu Leu Met Thr Ser  
115 120 125  
Gly Thr Leu Lys Thr Tyr Leu Arg Arg Phe Arg Glu Met Lys Pro Arg  
130 135 140  
Val Leu Gln Arg Trp Ser Arg Gln Ile Leu Arg Gly Leu His Phe Leu  
145 150 155 160  
His Ser Arg Val Pro Pro Ile Leu His Arg Asp Leu Lys Cys Asp Asn  
165 170 175  
Val Phe Ile Thr Gly Pro Thr Gly Ser Val Lys Ile Gly Asp Leu Gly  
180 185 190  
Leu Ala Thr Leu Lys Arg Ala Ser Phe Ala Lys Ser Val Ile Gly Thr  
195 200 205  
Pro Glu Phe Met Ala Pro Glu Met Tyr Glu Glu Lys Tyr Asp Glu Ala  
210 215 220  
Val Asp Val Tyr Ala  
225

<210> 2995  
<211> 1879  
<212> DNA  
<213> Homo sapiens

<400> 2995  
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120  
acatatagat tcattttctag ttgattcaat cctattttatg tattttaaaat acaaaataat  
180  
ggccatctgg ctagttccaa cggtagagca tgagactctt aaaatacaaa atacatctta  
240

atgtgtcaag aagaccacag ttagcaccag gaaaggaact ttacttttagc ttctgattac  
300  
ttttttatatt ttattttttac tttattatta ttattattat ttttgagatg gagtctcact  
360  
ctgntcaccc aggctggaat acagtgggtg gatctcagct cactgcaacc tccacctccc  
420  
aggttcaagc gattctcctg cctcagcctc ctgagtagct gggactctga tagatgcctg  
480  
ccaccacacc cgggtgattt ttgtattttt agtagagacg gggtttcgcc atgttgctca  
540  
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600  
gattacaggt gtgagccact gcacccagcc tggcagtc aa ttttaagcct cctatttccc  
660  
aggtttttagc ttaataatcc tcattagttt ttcagatttt tgtcagtcct gttttggggc  
720  
tattttgcct tagtgggcct aaacagaata ttaaaataca ttaataatcc atactgagag  
780  
tagagtataa atgggtttct cactccttag ggacacgagt ggaaacaata catcccatga  
840  
acacaggtga atgtccctgg ttatccctga gctgggcagt ttcacacaat cattttttct  
900  
ctgaggccaa agtctgtggt ttgatcatct tagcagcttc cagaacagaa agtaggttta  
960  
ctttgtctcc aaattctttt tctcgggtgct caagaagaat gccctgcttt cctgatccca  
1020  
ccacgaaaac tcccccaagg atgaagcctt ctccttcag gtttccagag aagcctccgt  
1080  
tccaggtcga gaagaagttg taccacactc ccagacggat aaatcccata aacatcatct  
1140  
tccgcctttg tggaccatag aactttttct tttcatccag gaagatttct cctttgaaat  
1200  
aaggctggaa atccttcact tcagtcctga tgtgctcctt taccactgca tagaggggga  
1260  
cgcccagctg gtccaacatg cttttcaggg aggacagatc cgcagcttcc tctcgacaga  
1320  
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1380  
ttgctttgaa agtccttggc tcttcttcca gtgttttcag gtctatatcc tccaggtact  
1440  
ccagggccgc tttctggggc ttggacagaa acacgtctgt gttggcaagc agcaatgcca  
1500  
aggcagcagc cccagggct cctgcaccaa tggaccacat ccccatgggtg aagaaacttg  
1560  
ggtcctggag gaaagacatt tctcaagtgc ctcccttctg ccggcctttt accgccccga  
1620  
cgcccgggcg ctaagggggc aaaccgcccg gcccgagggg tcccaggggc gggccccgga  
1680  
gtacctggag gatatagacc tgaaaacact ggagaaggaa ccaaggactt tcaaagcaaa  
1740  
ggagctatgg gaaaaaaatg gagctgtgat tatggcctg cggaggccag gctgtttcct  
1800  
ctgtcgagag gaagctgcgg atctgtcctc cctgaaaagc atgttgagac agctgggcgt  
1860

ccccctctat gcagtggta  
1879

<210> 2996  
<211> 101  
<212> PRT  
<213> Homo sapiens

<400> 2996  
His Gln Glu Arg Asn Phe Thr Leu Ala Ser Asp Tyr Phe Phe Ile Phe  
1 5 10 15  
Ile Phe Thr Leu Leu Leu Leu Leu Phe Leu Arg Trp Ser Leu Thr  
20 25 30  
Leu Xaa Thr Gln Ala Gly Ile Gln Trp Cys Asp Leu Ser Ser Leu Gln  
35 40 45  
Pro Pro Pro Pro Arg Phe Lys Arg Phe Ser Cys Leu Ser Leu Leu Ser  
50 55 60  
Ser Trp Asp Ser Asp Arg Cys Leu Pro Pro His Pro Gly Asp Phe Cys  
65 70 75 80  
Ile Phe Ser Arg Asp Gly Val Ser Pro Cys Cys Ser Gly Trp Ser Arg  
85 90 95  
Thr Pro Asp Leu Lys  
100

<210> 2997  
<211> 800  
<212> DNA  
<213> Homo sapiens

<400> 2997  
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gagccatcca aagtgacatc tccagtggtc acctcttcca ccataaaaga cattgtttct  
120  
acaaccatac ctgcttcctc tgagataaca agaattgaga tggagtcaac atccaccctg  
180  
acccccacac caaggagac cagcacctcc caggagatcc actcagccac aaagccaagc  
240  
actgttcctt acaaggcact cactagtgcc acgattgagg actccatgac acaagtcag  
300  
tcctctagca gaggacctag ccctgatcag tccacaatgt cacaagacat atccactgaa  
360  
gtgatcacca ggctctctac ctcccccatc aagacagaat ctacagaaat gaccattacc  
420  
acccaaacag ggtctcctgg ggctacatca aggggtaccc ttaccttgga cacttcaaca  
480  
acttttatgt cagggaccca ctcaactgca tctcaaagat tttcacactc acagatgacc  
540  
gctcttatga gtagaactcc tggagatgtg ccatggctaa cccatccctc tggggaagag  
600  
ccgcctctg cctctttctc actggcttca cctgtcttga cctcattttt ttcgtttttt  
660  
gccattccc aaaaacctcc accttttttg gttcctgggc aaacttttcc cctagggctg  
720

gggaaaccca aaatgtgggg ccaaccaga actgaaacat tcccccaat ggacaacctt  
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 800

<210> 2998  
 <211> 266  
 <212> PRT  
 <213> Homo sapiens

<400> 2998  
 Thr Gln Met Gly Thr Ile Ser Ala Arg Gln Glu Phe Tyr Ser Ser Tyr  
 1 5 10 15  
 Pro Gly Leu Pro Glu Pro Ser Lys Val Thr Ser Pro Val Val Thr Ser  
 20 25 30  
 Ser Thr Ile Lys Asp Ile Val Ser Thr Thr Ile Pro Ala Ser Ser Glu  
 35 40 45  
 Ile Thr Arg Ile Glu Met Glu Ser Thr Ser Thr Leu Thr Pro Thr Pro  
 50 55 60  
 Arg Glu Thr Ser Thr Ser Gln Glu Ile His Ser Ala Thr Lys Pro Ser  
 65 70 75 80  
 Thr Val Pro Tyr Lys Ala Leu Thr Ser Ala Thr Ile Glu Asp Ser Met  
 85 90 95  
 Thr Gln Val Met Ser Ser Ser Arg Gly Pro Ser Pro Asp Gln Ser Thr  
 100 105 110  
 Met Ser Gln Asp Ile Ser Thr Glu Val Ile Thr Arg Leu Ser Thr Ser  
 115 120 125  
 Pro Ile Lys Thr Glu Ser Thr Glu Met Thr Ile Thr Thr Gln Thr Gly  
 130 135 140  
 Ser Pro Gly Ala Thr Ser Arg Gly Thr Leu Thr Leu Asp Thr Ser Thr  
 145 150 155 160  
 Thr Phe Met Ser Gly Thr His Ser Thr Ala Ser Gln Arg Phe Ser His  
 165 170 175  
 Ser Gln Met Thr Ala Leu Met Ser Arg Thr Pro Gly Asp Val Pro Trp  
 180 185 190  
 Leu Thr His Pro Ser Gly Glu Glu Pro Ala Ser Ala Ser Phe Ser Leu  
 195 200 205  
 Ala Ser Pro Val Leu Thr Ser Phe Phe Ser Phe Phe Ala His Ser Gln  
 210 215 220  
 Lys Pro Pro Pro Phe Leu Val Pro Gly Gln Thr Phe Ser Leu Gly Leu  
 225 230 235 240  
 Gly Lys Pro Lys Met Trp Gly Gln Pro Arg Thr Glu Thr Phe Pro Pro  
 245 250 255  
 Met Asp Asn Leu Phe Glu Lys Gly Pro Phe  
 260 265

<210> 2999  
 <211> 550  
 <212> DNA  
 <213> Homo sapiens

<400> 2999  
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acccccttgc cactttggcc ccctccaggc tttgggcact gacaagcatg ggaaggaggc  
 120  
 tgaggggtgc actgaggaca gcccagtgc ggctgcagg cacccttaa catgaacagc  
 180  
 ctggtcacca tgaacagcag caggaggcag acaggctcct gggtggaag aagctggtcc  
 240  
 acagtgaaga cccacctcca agccaggga agcctgaagc ctgggggatg ggtcgccagt  
 300  
 ccagaaacc gcaagggcaa cttgtggtgc tttccctgg gccacccat ggccgccat  
 360  
 ggacgaattg gcattgcatt tctccctct gaggccata aaagcccctg ggctcagcca  
 420  
 gagctgagcg gatatcagga cgacaagctg cacagaggta ctaccatac caaggcctcc  
 480  
 tctctgctga gagctgcaca tacaatggaa tgacctgcct gtagagagag cttcccaactc  
 540  
 cagggtctcc  
 550

<210> 3000

<211> 167

<212> PRT

<213> Homo sapiens

<400> 3000

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Cys | Ser | Ser | Gln | Arg | Gly | Gly | Leu | Gly | Met | Gly | Ser | Thr | Ser |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |
| Val | Gln | Leu | Val | Val | Leu | Ile | Ser | Ala | Gln | Leu | Trp | Leu | Ser | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     | 30  |     |     |
| Ala | Phe | Met | Gly | Leu | Arg | Gly | Glu | Lys | Val | His | Ala | Asn | Ser | Met |
|     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Gly | Gly | His | Gly | Trp | Ala | Gln | Gly | Lys | Ala | Pro | Gln | Val | Ala | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |
| Val | Ser | Gly | Thr | Gly | Asp | Pro | Ser | Pro | Arg | Leu | Gln | Ala | Phe | Pro |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Leu | Glu | Val | Gly | Leu | His | Cys | Gly | Pro | Ala | Ser | Phe | His | Pro | Gly |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Cys | Leu | Pro | Pro | Ala | Ala | Val | His | Gly | Asp | Gln | Ala | Val | His | Val |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     | 110 |     |     |
| Gly | Cys | Leu | Gln | Ala | Ser | Thr | Gly | Leu | Ser | Ser | Val | His | Pro | Ser |
|     |     | 115 |     |     |     |     | 120 |     |     |     | 125 |     |     |     |
| Ser | Phe | Pro | Cys | Leu | Ser | Val | Pro | Lys | Ala | Trp | Arg | Gly | Pro | Lys |
|     | 130 |     |     |     |     | 135 |     |     |     | 140 |     |     |     |     |
| Gln | Gly | Gly | Trp | His | Val | Ser | Thr | Thr | Pro | Ser | Met | Cys | Thr | Leu |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |
| Trp | Ala | Val | Thr | Ala | Pro | Gly |     |     |     |     |     |     |     |     |
|     |     |     |     | 165 |     |     |     |     |     |     |     |     |     |     |

<210> 3001

<211> 1092

<212> DNA

<213> Homo sapiens

<400> 3001

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 120  
 gaagtacaga ggttgagccc ctatgtatgc ctgggggagt cccagaaagt ggaatcccaa  
 180  
 ccttgctcag ctaccagtgt tttcttctat aaccagaca ttgcaaagac agcagtaccc  
 240  
 actgaggcat ccagcccagc tcaggccctg ccaccnnca gtaccaaagc atcattgtca  
 300  
 ggcaaggat acagaacaca gtgctctcac cagactgcag cttgggggac accagcacg  
 360  
 gagagaagct gaggcggaac tgcactatct accggccctg gttctcccc tacagctact  
 420  
 tcgtgtgtgc agacaaagag agccagctgg aggcctatga cttcccagag gtgcagcagg  
 480  
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 540  
 cttcctcccc agagaacact tgccctcgag aagccaccaa gaaatccagg catggcctgg  
 600  
 actccatcac atcccaggac atcctaattg cttccagggtg gcaccagca cagcagaatg  
 660  
 gctacaagtg cgtggcctgc tgccgcatgt accccaccct ggacttcctc aagagccaca  
 720  
 tcaagagggg cttcagggag ggcttcagct gcaaggtgta ctaccgcaag ctcaaagccc  
 780  
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 840  
 cttcaatag tcctgctgaa caccttaggc aaattggcgg tgaagcctac ttatgtctct  
 900  
 agagagatgc caataaagtt agtcacagcc ttctgtccag tctgaggtca cccgcacag  
 960  
 cctgtgtcc tcccagaac ccggctctca tcaccttgg ctaatggttg cctagcaaca  
 1020  
 ccaggcacac accctcccct ttctctcttt taaaaataaa gacaatactt gaagtttggg  
 1080  
 aaaatcaaaa aa  
 1092

&lt;210&gt; 3002

&lt;211&gt; 115

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3002

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Pro | Phe | Arg | Ile | Pro | Gln | Asp | Val | Ile | His | Asn | Ser | Ser | Ala |
| 1   |     |     | 5   |     |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Trp | Leu | Ser | Leu | Lys | Gly | His | Cys | Ser | Val | Ser | Ala | Leu | Arg | Cys | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Glu | Val | Gln | Arg | Leu | Ser | Pro | Tyr | Val | Cys | Leu | Gly | Glu | Ser | Gln | Lys |
|     |     | 35  |     |     |     |     | 40  |     |     |     | 45  |     |     |     |     |
| Val | Glu | Ser | Gln | Pro | Cys | Ser | Ala | His | Gln | Cys | Phe | Phe | Tyr | Asn | Pro |
|     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |
| Asp | Ile | Ala | Lys | Thr | Ala | Val | Pro | Thr | Glu | Ala | Ser | Ser | Pro | Ala | Gln |



```

65              70              75              80
Ala Leu Pro Pro Xaa Ser Thr Lys Ala Ser Leu Ser Gly Lys Gly Tyr
              85              90              95
Arg Thr Gln Cys Ser His Gln Thr Ala Ala Trp Gly Thr Pro Ser Thr
              100              105              110
Glu Arg Ser
              115

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<210> 3003  
 <211> 474  
 <212> DNA  
 <213> Homo sapiens

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<400> 3003
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tatggaagct ctgcggtcat acaaccagga gcactcccag agcttcacgt ttgatgatgc
120
ccaacaggag gaccggaaga gactggcgga gctgctggtc tccgtcctgg aacagggctt
180
gccaccctcc caccgtgtca tctggtgca gagtgtccga atcctgtccc gggaccgcaa
240
ctgcctggac ccgttcacca gccgccagag cctgcaggca ctagcctgct atgctgacat
300
ctctgtctct gaggggtccg tcccagagtc cgcagacatg gatgttgtag tggagtccct
360
caagtgcctg tgcaacctcg tgctcagcag ccctgtggca cagatgctgg cagcagaggg
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474

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<210> 3004  
 <211> 155  
 <212> PRT  
 <213> Homo sapiens

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<400> 3004
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Val Ile Met Glu Ala Leu Arg Ser Tyr Asn Gln Glu His Ser Gln Ser
20     25     30
Phe Thr Phe Asp Asp Ala Gln Gln Glu Asp Arg Lys Arg Leu Ala Glu
35     40     45
Leu Leu Val Ser Val Leu Glu Gln Gly Leu Pro Pro Ser His Arg Val
50     55     60
Ile Trp Leu Gln Ser Val Arg Ile Leu Ser Arg Asp Arg Asn Cys Leu
65     70     75     80
Asp Pro Phe Thr Ser Arg Gln Ser Leu Gln Ala Leu Ala Cys Tyr Ala
85     90     95
Asp Ile Ser Val Ser Glu Gly Ser Val Pro Glu Ser Ala Asp Met Asp
100    105    110
Val Val Leu Glu Ser Leu Lys Cys Leu Cys Asn Leu Val Leu Ser Ser
115    120    125
Pro Val Ala Gln Met Leu Ala Ala Glu Ala Arg Leu Val Val Lys Leu

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130 135 140  
 Thr Glu Arg Val Gly Leu Tyr Arg Glu Arg Ser  
 145 150 155  
 <210> 3005  
 <211> 799  
 <212> DNA  
 <213> Homo sapiens  
 <400> 3005  
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 gacaacagtg acaacgtgga actcaagttc aatctggacc agtacgtcaa caagcggtag  
 120  
 ccaggcctcg tgaagattgt ccgcaacagc cggcgggaag gactgatccg cgcgcggctg  
 180  
 cagggtgga aggcggccac cgccccagtc gtcggcttct ttgatgcccc cgtcgagttc  
 240  
 aacacgggct gggccgagcc cgcactgtcg cggatccgag aggaccggcg tcgcatcgtg  
 300  
 ctgccagcca tcgacaacat caagtacagc acgtttgagg tgcagcagta tgcgaacgcc  
 360  
 gcccatggct acaactgggg cctctggtgc atgtacatca tcccccgca ggactggctg  
 420  
 gaccgcggcg acgagtcagc acccatcagg accccagcca tgatcggtg ctccttcgta  
 480  
 gtggaccgcg agtacttcgg agacattggg ctgctggacc ccggcatgga ggtgtatggc  
 540  
 ggcgagaacg tagaactggg catgagggtg tggcagtgtg gcggcagcat ggaggtgctg  
 600  
 cctgtctccc gcgtggcccc catcgagcgc accaggaagc cctacaacaa cgacattgac  
 660  
 tactacgcca agcgcaacgc cctgcgacc gccgaggtgt ggatggatga cttcaagtcc  
 720  
 caggtgtaca tggcctggaa catccccatg tcgaaccag ggggtggactt cggggacgtg  
 780  
 tctgagaggc tggccctgc  
 799

<210> 3006  
 <211> 266  
 <212> PRT  
 <213> Homo sapiens

<400> 3006  
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 Ile Leu Val Asp Asn Ser Asp Asn Val Glu Leu Lys Phe Asn Leu  
 20 25 30  
 Asp Gln Tyr Val Asn Lys Arg Tyr Pro Gly Leu Val Lys Ile Val Arg  
 35 40 45  
 Asn Ser Arg Arg Glu Gly Leu Ile Arg Ala Arg Leu Gln Gly Trp Lys  
 50 55 60  
 Ala Ala Thr Ala Pro Val Val Gly Phe Phe Asp Ala His Val Glu Phe

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65              70              75              80
Asn Thr Gly Trp Ala Glu Pro Ala Leu Ser Arg Ile Arg Glu Asp Arg
      85              90              95
Arg Arg Ile Val Leu Pro Ala Ile Asp Asn Ile Lys Tyr Ser Thr Phe
      100      105      110
Glu Val Gln Gln Tyr Ala Asn Ala Ala His Gly Tyr Asn Trp Gly Leu
      115      120      125
Trp Cys Met Tyr Ile Ile Pro Pro Gln Asp Trp Leu Asp Arg Gly Asp
      130      135      140
Glu Ser Ala Pro Ile Arg Thr Pro Ala Met Ile Gly Cys Ser Phe Val
      145      150      155      160
Val Asp Arg Glu Tyr Phe Gly Asp Ile Gly Leu Leu Asp Pro Gly Met
      165      170      175
Glu Val Tyr Gly Gly Glu Asn Val Glu Leu Gly Met Arg Val Trp Gln
      180      185      190
Cys Gly Gly Ser Met Glu Val Leu Pro Cys Ser Arg Val Ala His Ile
      195      200      205
Glu Arg Thr Arg Lys Pro Tyr Asn Asn Asp Ile Asp Tyr Tyr Ala Lys
      210      215      220
Arg Asn Ala Leu Arg Thr Ala Glu Val Trp Met Asp Asp Phe Lys Ser
      225      230      235      240
His Val Tyr Met Ala Trp Asn Ile Pro Met Ser Asn Pro Gly Val Asp
      245      250      255
Phe Gly Asp Val Ser Glu Arg Leu Ala Leu
      260      265

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&lt;210&gt; 3007

&lt;211&gt; 536

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3007

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cttaagagag gttgcaatgt gaatgataga gatggattga cagatatgac tcttttacat
60
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120
actcagctta ttgacctggg agcagacatt agtttgcgga gtcgctggac aaacatgaat
180
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536

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&lt;210&gt; 3008

&lt;211&gt; 163

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3008

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 Asp Val Glu Thr Ala Val Lys Phe Ala Thr Gln Leu Ile Asp Leu Gly  
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 Ala Asp Ile Ser Leu Arg Ser Arg Trp Thr Asn Met Asn Ala Leu His  
 35 40 45  
 Tyr Ala Ala Tyr Phe Asp Val Pro Glu Leu Ile Arg Val Ile Leu Lys  
 50 55 60  
 Thr Ser Lys Pro Lys Asp Val Asp Ala Pro Cys Ser Asp Phe Asn Phe  
 65 70 75 80  
 Gly Thr Ala Leu His Ile Ala Ala Tyr Asn Leu Cys Ala Gly Ala Val  
 85 90 95  
 Lys Cys Leu Leu Glu Gln Gly Ala Asn Pro Ala Phe Arg Asn Asp Lys  
 100 105 110  
 Gly Gln Ile Pro Ala Asp Val Val Pro Asp Pro Val Asp Met Pro Leu  
 115 120 125  
 Glu Met Ala Asp Ala Ala Ala Thr Ala Lys Glu Ile Lys Gln Met Leu  
 130 135 140  
 Leu Asp Ala Val Pro Leu Ser Cys Asn Ile Ser Lys Ala Met Leu Pro  
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 Pro Ser Arg

&lt;210&gt; 3009

&lt;211&gt; 1335

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3009

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 1335

&lt;210&gt; 3010

&lt;211&gt; 310

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3010

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Asp | Arg | Ser | Lys | Arg | Asn | Ser | Ile | Ala | Gly | Phe | Pro | Pro | Arg | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Glu | Arg | Leu | Glu | Glu | Phe | Glu | Gly | Gly | Gly | Gly | Gly | Glu | Gly | Asn | Val |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ser | Gln | Val | Gly | Arg | Val | Trp | Pro | Ser | Ser | Tyr | Arg | Ala | Leu | Ile | Ser |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ala | Phe | Ser | Arg | Leu | Thr | Arg | Leu | Asp | Asp | Phe | Thr | Cys | Lys | Lys | Ile |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Gly | Ser | Gly | Phe | Phe | Ser | Glu | Val | Phe | Lys | Val | Arg | His | Arg | Ala | Ser |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |
| Gly | Gln | Val | Met | Ala | Leu | Lys | Met | Asn | Thr | Leu | Ser | Ser | Asn | Arg | Ala |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Asn | Met | Leu | Lys | Glu | Val | Gln | Leu | Met | Asn | Arg | Leu | Ser | His | Pro | Asn |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Ile | Leu | Arg | Phe | Met | Gly | Val | Cys | Val | His | Gln | Gly | Gln | Leu | His | Ala |
|     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |     |
| Leu | Thr | Glu | Tyr | Ile | Asn | Ser | Gly | Asn | Leu | Glu | Gln | Leu | Leu | Asp | Ser |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Asn | Leu | His | Leu | Pro | Trp | Thr | Val | Arg | Val | Lys | Leu | Ala | Tyr | Asp | Ile |
| 145 |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     | 160 |     |
| Ala | Val | Gly | Leu | Ser | Tyr | Leu | His | Phe | Lys | Gly | Ile | Phe | His | Arg | Asp |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Leu | Thr | Ser | Lys | Asn | Cys | Leu | Ile | Lys | Arg | Asp | Glu | Asn | Gly | Tyr | Ser |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     | 180 |     | 185 |     | 190 |     |     |     |     |     |     |     |     |     |     |
| Ala | Val | Val | Ala | Asp | Phe | Gly | Leu | Ala | Glu | Lys | Ile | Pro | Asp | Val | Ser |
|     | 195 |     | 200 |     | 205 |     |     |     |     |     |     |     |     |     |     |
| Met | Gly | Ser | Glu | Lys | Leu | Ala | Val | Val | Gly | Ser | Pro | Phe | Trp | Met | Ala |
|     | 210 |     | 215 |     | 220 |     |     |     |     |     |     |     |     |     |     |
| Pro | Glu | Val | Leu | Arg | Asp | Glu | Pro | Tyr | Asn | Glu | Lys | Ala | Asp | Val | Phe |
|     | 225 |     | 230 |     | 235 |     |     |     |     |     |     |     |     | 240 |     |
| Ser | Tyr | Gly | Ile | Ile | Leu | Cys | Glu | Ile | Ile | Val | Arg | Ile | Gln | Ala | Asp |
|     |     |     | 245 |     | 250 |     |     |     |     |     |     |     | 255 |     |     |
| Pro | Asp | Tyr | Leu | Pro | Arg | Thr | Glu | Asn | Phe | Gly | Leu | Asp | Tyr | Asp | Ala |
|     |     |     | 260 |     | 265 |     |     |     |     |     |     |     | 270 |     |     |
| Phe | Gln | His | Met | Val | Gly | Asp | Cys | Pro | Pro | Asp | Phe | Leu | Gln | Leu | Thr |
|     |     |     | 275 |     | 280 |     |     |     |     |     |     |     | 285 |     |     |
| Phe | Asn | Cys | Cys | Asn | Val | Ser | Val | Phe | Leu | Pro | Leu | Pro | Phe | Ile | Arg |
|     | 290 |     |     |     | 295 |     |     |     |     |     | 300 |     |     |     |     |
| Gly | Trp | Leu | Asn | Pro | Phe |     |     |     |     |     |     |     |     |     |     |
|     | 305 |     |     |     | 310 |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 3011

&lt;211&gt; 3253

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3011

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<210> 3012

<211> 870

<212> PRT

<213> Homo sapiens

<400> 3012

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Asn | His | Leu | Asn | Val | Leu | Ala | Lys | Ala | Leu | Tyr | Asp | Asn | Val | Ala |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Glu | Ser | Pro | Asp | Glu | Leu | Ser | Phe | Arg | Lys | Gly | Asp | Ile | Met | Thr | Val |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Leu | Glu | Gln | Asp | Thr | Gln | Gly | Leu | Asp | Gly | Trp | Trp | Leu | Cys | Ser | Leu |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |
| His | Gly | Arg | Gln | Gly | Ile | Val | Pro | Gly | Asn | Arg | Leu | Lys | Ile | Leu | Val |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Gly | Met | Tyr | Asp | Lys | Lys | Pro | Ala | Gly | Pro | Gly | Ser | Gly | Pro | Pro | Ala |
| 65  |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     | 80  |     |
| Thr | Pro | Ala | Gln | Pro | Gln | Pro | Gly | Leu | His | Ala | Pro | Ala | Pro | Pro | Ala |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Ser | Gln | Tyr | Thr | Pro | Met | Leu | Pro | Asn | Thr | Tyr | Gln | Pro | Gln | Pro | Asp |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Ser | Val | Tyr | Leu | Val | Pro | Thr | Pro | Ser | Lys | Ala | Gln | Gln | Gly | Leu | Tyr |
|     |     | 115 |     |     |     | 120 |     |     |     |     |     | 125 |     |     |     |
| Gln | Val | Pro | Gly | Pro | Ser | Pro | Gln | Phe | Gln | Ser | Pro | Pro | Ala | Lys | Gln |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Thr | Ser | Thr | Phe | Ser | Lys | Gln | Thr | Pro | His | His | Pro | Phe | Pro | Ser | Pro |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Ala | Thr | Asp | Leu | Tyr | Gln | Val | Pro | Pro | Gly | Pro | Gly | Gly | Pro | Ala | Gln |



2242

|                         |                         |                 |
|-------------------------|-------------------------|-----------------|
| 595                     | 600                     | 605             |
| Lys Ala Thr Ala Pro Gly | Pro Glu Gly Gly Gly Thr | Leu His Pro Asn |
| 610                     | 615                     | 620             |
| Pro Thr Asp Lys Thr Ser | Ser Ile Gln Ser Arg Pro | Leu Pro Ser Pro |
| 625                     | 630                     | 635             |
| Pro Lys Phe Thr Ser Gln | Asp Ser Pro Asp Gly Gln | Tyr Glu Asn Ser |
| 645                     | 650                     | 655             |
| Glu Gly Gly Trp Met Glu | Asp Tyr Val His Leu     | Gln Gly Lys     |
| 660                     | 665                     | 670             |
| Glu Glu Phe Glu Lys Thr | Gln Lys Glu Leu Leu Glu | Lys Gly Asn Ile |
| 675                     | 680                     | 685             |
| Thr Arg Gln Gly Lys Ser | Gln Leu Glu Leu Gln Gln | Leu Lys Gln Phe |
| 690                     | 695                     | 700             |
| Glu Arg Leu Glu Gln Glu | Val Ser Arg Pro Ile Asp | His Asp Leu Ala |
| 705                     | 710                     | 715             |
| Asn Trp Thr Pro Ala Gln | Pro Leu Ala Pro Gly Arg | Thr Gly Gly Leu |
| 725                     | 730                     | 735             |
| Gly Pro Ser Asp Arg Gln | Leu Leu Leu Phe Tyr Leu | Glu Gln Cys Glu |
| 740                     | 745                     | 750             |
| Ala Asn Leu Thr Thr Leu | Thr Asn Ala Val Asp Ala | Phe Phe Thr Ala |
| 755                     | 760                     | 765             |
| Val Ala Thr Asn Gln Pro | Pro Lys Ile Phe Val Ala | His Ser Lys Phe |
| 770                     | 775                     | 780             |
| Val Ile Leu Ser Ala His | Lys Leu Val Phe Ile Gly | Asp Thr Leu Ser |
| 785                     | 790                     | 795             |
| Arg Gln Ala Lys Ala Ala | Asp Val Arg Ser Gln Val | Thr His Tyr Ser |
| 805                     | 810                     | 815             |
| Asn Leu Leu Cys Asp Leu | Leu Arg Gly Ile Val Ala | Thr Thr Lys Ala |
| 820                     | 825                     | 830             |
| Ala Ala Leu Gln Tyr Pro | Ser Pro Ser Ala Ala Gln | Asp Met Val Glu |
| 835                     | 840                     | 845             |
| Arg Val Lys Glu Leu Gly | His Ser Thr Gln Gln Phe | Arg Arg Val Leu |
| 850                     | 855                     | 860             |
| Gly Gln Leu Ala Ala Ala |                         |                 |
| 865                     | 870                     |                 |

&lt;210&gt; 3013

&lt;211&gt; 248

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3013

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248

&lt;210&gt; 3014

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 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Lys Ala Ala Gln Gln Ala Gly Trp Gly Leu Leu Leu Ala Arg Arg Trp  
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<210> 3015  
 <211> 438  
 <212> DNA  
 <213> Homo sapiens

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 <213> Homo sapiens

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 Lys Pro Pro Trp Gln Leu Cys Pro Arg Ala Phe Ala Phe Cys His Arg  
 35 40 45  
 Val Pro Gly Gly Met Val His Pro Ile Phe Leu Glu Pro Val Thr Val

|   |    |    |
|---|----|----|
| 50  | 55 | 60 |
| Gln Leu Gly Gln Val Lys Phe Ser Cys Glu Asn Ala Ser Pro Asp Thr |    |    |
| 65  | 70 | 75 |
| Arg Cys Val Gly Gln Leu Ser Ile Pro Ser Pro Arg Met Pro Trp Gly |    | 80 |
|   | 85 | 90 |
| Arg Leu Gln Ala Arg Tyr Val                                     |    | 95 |
| 100   |    |    |

&lt;210&gt; 3017

&lt;211&gt; 4796

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3017

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&lt;210&gt; 3022

&lt;211&gt; 94

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3022

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | His | Thr | His | Thr | His | Tyr | Asn | Leu | Tyr | Leu | Phe | Phe | Leu | Lys | His |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Gly | Leu | Phe | Leu | Ser | Ser | Arg | Leu | Glu | Cys | Ser | Gly | Ala | Ile | Met | Asp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| His | Cys | Ser | Leu | Asp | Leu | Pro | Gly | Ser | Ser | Asp | Pro | Pro | Gly | Ser | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Pro | Val | Ala | Gly | Thr | Thr | Gly | Ala | Leu | Pro | His | Arg | Lys | Ala | His | Phe |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Leu | Glu | Ala | Glu | Thr | Glu | Ala | Pro | Ser | Gly | Lys | Gly | Asp | Pro | Pro | Gly |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Met | Arg | Gly | Ala | Gln | Arg | Ala | Ala | Thr | Trp | Gly | Pro | Thr | Arg |     |     |
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&lt;210&gt; 3023

&lt;211&gt; 1834

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3023

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&lt;210&gt; 3024

&lt;211&gt; 347

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3024

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&lt;210&gt; 3025

&lt;211&gt; 1370

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3025

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1370

&lt;210&gt; 3026

&lt;211&gt; 152

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3026

```

Met Glu Ser Leu Ser Lys Gly Gly Asn Ile Met Glu Gln Asn Phe Glu
 1           5           10           15
Pro Ile Arg Arg Gln Ser Leu Thr Pro Pro Gln Asn Thr Ile Thr
 20           25           30
Trp Glu Glu Tyr Ile Ser Ala Glu Asn Gly Lys Ala Pro His Leu Gly
 35           40           45
Arg Glu Leu Val Cys Lys Glu Ser Lys Lys Thr Phe Lys Ala Thr Ile
 50           55           60
Ala Met Ser Gln Glu Phe Pro Leu Gly Ile Glu Leu Leu Leu Asn Val
 65           70           75           80
Leu Glu Val Val Ala Pro Phe Lys His Phe Asn Lys Leu Arg Glu Phe
 85           90           95
Val Gln Met Lys Leu Pro Pro Gly Phe Pro Val Lys Leu Asp Ile Pro
 100          105          110
Val Phe Pro Thr Ile Thr Ala Thr Val Thr Phe Gln Glu Phe Arg Tyr
 115          120          125
Asp Glu Phe Asp Gly Ser Ile Phe Thr Ile Pro Asp Asp Tyr Lys Glu
 130          135          140
Asp Pro Ser Arg Phe Pro Asp Leu
145          150

```

&lt;210&gt; 3027

&lt;211&gt; 1154

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3027

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nccgttttcc cgtcgcacgt ggtggccact gttggcttct gaatggtttg caaggcggat
60
atccacgccca aggccctttgg atcgggccgtg ggtacatccg tctgagccgt tcctttccat
120
cgcagacggc ggcctccgcg gcgctctcca gtcatggact accggcggct tctcatgagg
180
cgggtggtcc cggggcaatt cgacgacgcg gactcctctg acagtgaaaa cagagacttg
240
aagacagtca aagagaagga tgacattctg tttgaagacc ttcaagacaa tgtgaatgag
300
aatggtgaag gtgaaataga agatgaggag gaggagggtt atgatgatga tgatgatgac
360
tgggactggg atgaaggagt tggaaaactc gccaaagggtt atgtctggaa tggaggaagc
420
aaccacagg caaatcgaca gacctccgac agcagttcag ccaaaatgtc tactccagca
480
gacaaggctt tacggaaatt tgagaataaa attaathtag ataagctaaa tgttactgat
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tccgtcataa ataaagtcac cgaaaagtct agacaaaagg aagcagatat gtatcgcac
600
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660
ttattcaaga tgttgactag aggaatcata acagagataa atggctgcat tagcacagga
720
aaagaagcta atgtatacca tgctagcaca gcaaatggag agagcagagc aatcaaaatt
780

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tataaaactt ctatttttgt gttcaaagat cgggataaat atgtaagtgg agaattcaga  
 840  
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 900  
 gaaatgagga acttaatcag gctaaacaca gcagagatac catgtccaga accaataatg  
 960  
 ctaagaagtc atgttcttgt catgagtttc atcggtaaag atgacatttc ttttcattca  
 1020  
 aggctgcac cactcttgaa aaatgtccag ttatcagaat ccaaggctcg ggagttgtac  
 1080  
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 1154

<210> 3028

<211> 331

<212> PRT

<213> Homo sapiens

<400> 3028

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Asp | Tyr | Arg | Arg | Leu | Leu | Met | Ser | Arg | Val | Val | Pro | Gly | Gln | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Asp | Asp | Ala | Asp | Ser | Ser | Asp | Ser | Glu | Asn | Arg | Asp | Leu | Lys | Thr | Val |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Lys | Glu | Lys | Asp | Asp | Ile | Leu | Phe | Glu | Asp | Leu | Gln | Asp | Asn | Val | Asn |
|     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Glu | Asn | Gly | Glu | Gly | Glu | Ile | Glu | Asp | Glu | Glu | Glu | Gly | Tyr | Asp |     |
|     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |
| Asp | Asp | Asp | Asp | Asp | Trp | Asp | Trp | Asp | Glu | Gly | Val | Gly | Lys | Leu | Ala |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Lys | Gly | Tyr | Val | Trp | Asn | Gly | Gly | Ser | Asn | Pro | Gln | Ala | Asn | Arg | Gln |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Thr | Ser | Asp | Ser | Ser | Ala | Lys | Met | Ser | Thr | Pro | Ala | Asp | Lys | Val |     |
|     |     |     | 100 |     |     |     | 105 |     |     |     |     | 110 |     |     |     |
| Leu | Arg | Lys | Phe | Glu | Asn | Lys | Ile | Asn | Leu | Asp | Lys | Leu | Asn | Val | Thr |
|     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |     |
| Asp | Ser | Val | Ile | Asn | Lys | Val | Thr | Glu | Lys | Ser | Arg | Gln | Lys | Glu | Ala |
|     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |     |
| Asp | Met | Tyr | Arg | Ile | Lys | Asp | Lys | Ala | Asp | Arg | Ala | Thr | Val | Glu | Gln |
| 145 |     |     |     | 150 |     |     |     | 155 |     |     |     |     |     | 160 |     |
| Val | Leu | Asp | Pro | Arg | Thr | Arg | Met | Ile | Leu | Phe | Lys | Met | Leu | Thr | Arg |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Gly | Ile | Ile | Thr | Glu | Ile | Asn | Gly | Cys | Ile | Ser | Thr | Gly | Lys | Glu | Ala |
|     | 180 |     |     |     |     | 185 |     |     |     |     |     | 190 |     |     |     |
| Asn | Val | Tyr | His | Ala | Ser | Thr | Ala | Asn | Gly | Glu | Ser | Arg | Ala | Ile | Lys |
|     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |     |
| Ile | Tyr | Lys | Thr | Ser | Ile | Leu | Val | Phe | Lys | Asp | Arg | Asp | Lys | Tyr | Val |
|     | 210 |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |     |
| Ser | Gly | Glu | Phe | Arg | Phe | Arg | His | Gly | Tyr | Cys | Lys | Gly | Asn | Pro | Arg |
| 225 |     |     |     | 230 |     |     |     | 235 |     |     |     |     | 240 |     |     |
| Lys | Met | Val | Lys | Thr | Trp | Ala | Glu | Lys | Glu | Met | Arg | Asn | Leu | Ile | Arg |
|     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |     |
| Leu | Asn | Thr | Ala | Glu | Ile | Pro | Cys | Pro | Glu | Pro | Ile | Met | Leu | Arg | Ser |

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                260                265                270
His Val Leu Val Met Ser Phe Ile Gly Lys Asp Asp Ile Ser Phe His
      275                280                285
Ser Arg Pro Ala Pro Leu Leu Lys Asn Val Gln Leu Ser Glu Ser Lys
      290                295                300
Ala Arg Glu Leu Tyr Leu Gln Val Ile Gln Tyr Met Arg Arg Met Tyr
305                310                315                320
Gln Asp Ala Arg Leu Val His Ala Asp Arg Arg
      325                330

```

<210> 3029  
 <211> 344  
 <212> DNA  
 <213> Homo sapiens

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<400> 3029
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120
acatttcccg aggaactaga tatgagtact tttattgatg ttgaagatga aaaatctcct
180
cagactgaaa gttgcactga caggggagca gaaaatgaag gtagttgtca cagtgatcag
240
atgagcaacg atttctccaa tgatgatggt gttgatgaag gaatctgttt tgaaaccaat
300
agtgggaactg aaaagatctc aaaatctgga cctgaaaaga attc
344

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<210> 3030  
 <211> 114  
 <212> PRT  
 <213> Homo sapiens

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<400> 3030
Thr Arg Asp Ala Arg Lys Gly Leu Arg Phe Leu His Phe Pro Tyr Leu
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Leu Thr Leu Gln Leu Lys Arg Phe Asp Phe Asp Tyr Thr Thr Met His
      20      25      30
Arg Ile Lys Leu Asn Asp Arg Met Thr Phe Pro Glu Glu Leu Asp Met
      35      40      45
Ser Thr Phe Ile Asp Val Glu Asp Glu Lys Ser Pro Gln Thr Glu Ser
      50      55      60
Cys Thr Asp Arg Gly Ala Glu Asn Glu Gly Ser Cys His Ser Asp Gln
      65      70      75      80
Met Ser Asn Asp Phe Ser Asn Asp Asp Gly Val Asp Glu Gly Ile Cys
      85      90      95
Phe Glu Thr Asn Ser Gly Thr Glu Lys Ile Ser Lys Ser Gly Pro Glu
      100     105     110
Lys Asn

```

<210> 3031  
 <211> 567

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3031

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 60  
 cctccccctt cctattttgc cactttttac tcgtgcacac cccggatgaa ccgcagattg  
 120  
 gttggctctg atgttattcc cctgccacac atctacggag ctgcaatcaa aggtgtggaa  
 180  
 gtgttctgtc ctctggatcc cccgccgcca tatgaagctg tggtagacca gatggaccag  
 240  
 gagcagggat cttcattcca aatgtcagaa ggatcagaag ctgctgtgat cccattggat  
 300  
 ctgggctgca cacaagtgc tcaagatggg gacattccta acatacctgc cgaagaaaat  
 360  
 gcatccacct caactcccag ttcaaccctg gtgcgtccta tcagaagccg gagagccctc  
 420  
 ccacccttga ggaccaggtc gaagagtgc cctgtgtccc atccttctga ggagagagct  
 480  
 gcccagtgct tcagctgtga agctgcaaca cagactgaaa ggagactgga tctggctgca  
 540  
 gtgactctga ggagaggctt gagatct  
 567

&lt;210&gt; 3032

&lt;211&gt; 189

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3032

Ala Glu Glu Ala Glu Asp His Gly Arg Ile Pro Asp Pro Asp Asp Phe  
 1 5 10 15  
 Val Pro Pro Val Pro Pro Pro Ser Tyr Phe Ala Thr Phe Tyr Ser Cys  
 20 25 30  
 Thr Pro Arg Met Asn Arg Arg Leu Val Gly Pro Asp Val Ile Pro Leu  
 35 40 45  
 Pro His Ile Tyr Gly Ala Arg Ile Lys Gly Val Glu Val Phe Cys Pro  
 50 55 60  
 Leu Asp Pro Pro Pro Pro Tyr Glu Ala Val Val Ser Gln Met Asp Gln  
 65 70 75 80  
 Glu Gln Gly Ser Ser Phe Gln Met Ser Glu Gly Ser Glu Ala Ala Val  
 85 90 95  
 Ile Pro Leu Asp Leu Gly Cys Thr Gln Val Thr Gln Asp Gly Asp Ile  
 100 105 110  
 Pro Asn Ile Pro Ala Glu Glu Asn Ala Ser Thr Ser Thr Pro Ser Ser  
 115 120 125  
 Thr Leu Val Arg Pro Ile Arg Ser Arg Arg Ala Leu Pro Pro Leu Arg  
 130 135 140  
 Thr Arg Ser Lys Ser Asp Pro Val Leu His Pro Ser Glu Glu Arg Ala  
 145 150 155 160  
 Ala Pro Val Leu Ser Cys Glu Ala Ala Thr Gln Thr Glu Arg Arg Leu  
 165 170 175  
 Asp Leu Ala Ala Val Thr Leu Arg Arg Gly Leu Arg Ser



180

185

<210> 3033  
 <211> 821  
 <212> DNA  
 <213> Homo sapiens

<400> 3033  
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 120  
 tactatgata aattatttaa ggaatactgc atagcagatc tcagtaaata taaagaaaat  
 180  
 aagtttggat ttaggtggcg agtagaaaaa gaagtaattt caggaaaagg tcaatttttc  
 240  
 tgtggaaata aatattgtga taaaaaagaa ggcttaaaga gttgggaagt taattttggt  
 300  
 tatattgagc atggtgagaa gagaaatgca cttgttaaata taaggttatg ccaagaatgt  
 360  
 tccattaaat taaatttcca tcacaggaga aaagaaatca agtcaaaaaa aagaaaagat  
 420  
 aaaacccaaa aagactgtga agagtcacata cataaaaaat ccagattatc ttctgcagaa  
 480  
 gaggcctcca agaaaaaaga taaaggacat tcattctcaa agaaatctga agattctcta  
 540  
 cttagaaaact ctgatgagga agaaagtgtc tcagaatctg aactttggaa gggccacta  
 600  
 ccagagacag atgaaaaatc acaggaagaa gaatttgatg agtattttca ggatttgttt  
 660  
 ctatgagacg agagagagaa gcctccgctc cttaatgtga aacttcatga agttttaaac  
 720  
 ctcatgcaat ttgaaattcc atctacgtct ttatctgcaa gttacagctt ctgtgctttg  
 780  
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 821

<210> 3034  
 <211> 221  
 <212> PRT  
 <213> Homo sapiens

<400> 3034  
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 20 25 30  
 Trp Glu Lys Arg Leu Ala Lys Lys Tyr Tyr Asp Lys Leu Phe Lys Glu  
 35 40 45  
 Tyr Cys Ile Ala Asp Leu Ser Lys Lys Tyr Lys Glu Asn Lys Phe Gly Phe  
 50 55 60  
 Arg Trp Arg Val Glu Lys Glu Val Ile Ser Gly Lys Gly Gln Phe Phe  
 65 70 75 80  
 Cys Gly Asn Lys Tyr Cys Asp Lys Lys Glu Gly Leu Lys Ser Trp Glu

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<210> 3035
<211> 878
<212> DNA
<213> Homo sapiens
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<400> 3035  
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120  
cctcagacca cgacaggggc ctccacaca cggctcgcag aacctgtgca aggagaacca  
180  
caaaggatga gcactctggc ccacccaaaa ccatggcagc cctgagggca cagactggac  
240  
acctgcaga gtctcactct gtcattcagg gtggagtgca atggcgcaat ctcagctcac  
300  
tgcaacctcc cactccggg ctcaagcaat tctcctgacc cacactcagg cccagctcct  
360  
tcccagactg tcatcctctt tctagaagga aacagggacc ctgggggtcg gggatggccc  
420  
tgagctccct gctgtgcccc acacctggcg ggtctttgcc cacatgtgcc tagagtctgc  
480  
atgctctgcc ccatggctac ccgctgctgc ctgcaaggtt ccagagtcac gtccccagt  
540  
agtctctgac ccggcgcca gcacaccagt gtgaatcacg tgtgtcccca gtgagtctct  
600  
gaccggcgcg ccagcgcacc agtgtgaatc acatgcgtcc ccagtgagtc tctgaccgg  
660  
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720  
ctgtgccctc agggctgcca tggttttggg tgggccagag tgctcatcct ttgtggttct  
780  
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840  
gggttagaat ctgtaggctg ggcaccttc gggaaccg  
878

<210> 3036  
 <211> 65  
 <212> PRT  
 <213> Homo sapiens

<400> 3036  
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 Glu Cys Asn Gly Ala Ile Ser Ala His Cys Asn Leu Pro Leu Pro Gly  
                     20                    25                    30  
 Ser Ser Asn Ser Pro Asp Pro His Ser Gly Pro Ala Pro Ser Gln Thr  
             35                    40                    45  
 Val Ile Leu Phe Leu Glu Gly Asn Arg Asp Pro Gly Gly Arg Gly Trp  
     50                    55                    60  
 Pro  
 65

<210> 3037  
 <211> 3538  
 <212> DNA  
 <213> Homo sapiens

<400> 3037  
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 120  
 ctcaagctca tagtagatgc tttcctacag cagttaccca actgtgtcaa ccgagatctg  
 180  
 atagacaagg cagcaatgga tttttgcatg aacatgaaca caaaagcaaa caggaagaag  
 240  
 ttggtacggg cactcttcat agttcctaga caaagggttg atttgctacc attttatgca  
 300  
 agattgggtg ctacattgca tccctgcatg tctgatgtag cagaggatct ttgttccatg  
 360  
 ctgagggggg atttcagatt tcatgtacgg aaaaaggacc agatcaatat tgaaacaaag  
 420  
 aataaaactg ttcgttttat aggagaacta actaagttta agatgttcac caaaaatgac  
 480  
 acactgcatt gtttaaagat gcttctgtca gacttctctc atcaccatat tgaaatggca  
 540  
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 720  
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 840  
 gaagtgaag actatgttat ttgttgtatg ataaacatct ggaatgtgaa atataatagt  
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960  
cacgttgtgg atggagtgtt agaagatatt cgattaggaa tggaggtaa tcaacctaaa  
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1140  
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1560  
gaacaatctg gaaatgaaag tgaagtaaat gagccagaag aagaggaggg ttctgataat  
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1740  
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2160  
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2340  
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2400  
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2520

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 2700  
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 2760  
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 2820  
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 2880  
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 2940  
 ttttactata cagagagcat taattcagat ggcttagaaa agtgatacca gcccaagaac  
 3000  
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 3060  
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 3120  
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 3180  
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 3240  
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 3300  
 agtatattta gtcggagagc acatctgtat gcgacaactt gattacatct ttttttctag  
 3360  
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 3420  
 caaaacttgt aaagttgtaa catttcacat ggaaatgctg cccaatcttc accagcttca  
 3480  
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 3538

<210> 3038

<211> 697

<212> PRT

<213> Homo sapiens

<400> 3038

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Asn | Cys | Val | Asn | Arg | Asp | Leu | Ile | Asp | Lys | Ala | Ala | Met | Asp | Phe |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Cys | Met | Asn | Met | Asn | Thr | Lys | Ala | Asn | Arg | Lys | Lys | Leu | Val | Arg | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Leu | Phe | Ile | Val | Pro | Arg | Gln | Arg | Leu | Asp | Leu | Leu | Pro | Phe | Tyr | Ala |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Arg | Leu | Val | Ala | Thr | Leu | His | Pro | Cys | Met | Ser | Asp | Val | Ala | Glu | Asp |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Leu | Cys | Ser | Met | Leu | Arg | Gly | Asp | Phe | Arg | Phe | His | Val | Arg | Lys | Lys |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Asp | Gln | Ile | Asn | Ile | Glu | Thr | Lys | Asn | Lys | Thr | Val | Arg | Phe | Ile | Gly |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Glu | Leu | Thr | Lys | Phe | Lys | Met | Phe | Thr | Lys | Asn | Asp | Thr | Leu | His | Cys |

2263

|   |     |     |     |     |
|---|-----|-----|-----|-----|
| 530   |     | 535 |     | 540 |
| Met Met Leu Glu Asn Leu Gln Gln Arg Ser Gly Glu Ser Val Lys Val |     |     |     |     |
| 545   |     | 550 |     | 555 |
| His Gln Leu Asp Val Ala Ile Pro Leu His Leu Lys Ser Gln Leu Arg |     |     |     | 560 |
|   | 565 |     | 570 | 575 |
| Lys Gly Pro Pro Leu Gly Gly Gly Glu Gly Glu Ala Glu Ser Ala Asp |     |     |     |     |
|   | 580 |     | 585 | 590 |
| Thr Met Pro Phe Val Met Leu Thr Arg Lys Gly Asn Lys Gln Gln Phe |     |     |     |     |
|   | 595 |     | 600 | 605 |
| Lys Ile Leu Asn Val Pro Met Ser Ser Gln Leu Ala Ala Asn His Trp |     |     |     |     |
|   | 610 |     | 615 | 620 |
| Asn Gln Gln Gln Ala Glu Gln Glu Glu Arg Met Arg Met Lys Lys Leu |     |     |     |     |
| 625   |     | 630 |     | 635 |
| Thr Leu Asp Ile Asn Glu Arg Gln Glu Gln Glu Asp Tyr Gln Glu Met |     |     |     | 640 |
|   | 645 |     | 650 | 655 |
| Leu Gln Ser Leu Ala Gln Arg Pro Ala Pro Ala Asn Thr Asn Arg Glu |     |     |     |     |
|   | 660 |     | 665 | 670 |
| Arg Arg Pro Arg Tyr Gln His Pro Lys Gly Ala Pro Asn Ala Asp Leu |     |     |     |     |
|   | 675 |     | 680 | 685 |
| Ile Phe Lys Thr Gly Gly Arg Arg Arg                             |     |     |     |     |
|   | 690 |     | 695 |     |

&lt;210&gt; 3039

&lt;211&gt; 1836

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3039

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60
aaatctaaca gttaaaaaat ggtaaagcaa tacaacaat gtgttactag cagcatccag
120
tcgttagaat ctctcaccct gcttctcggt ctgatctgtg caagctcagt ctcttctgag
180
cctgcagcta cctccatccc tcatcgtagt gcaggccaaa ccaaatttta taaaattaac
240
aatttaaggt taaataagct taaataaggg tgttaaatac aagacacttc atcaaagctt
300
ctgtacaaag ataaacaaat ctggcattgt acaagtgggt ccgctggctc acagcacaca
360
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420
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480
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660
gctatggtaa tgtggctgtg gaaataaaac tactgtacat ccaaaaaaat agagcacctt
720
taacattaaa gtatatgtct gattatttgt tctcatgttt attttacaat actaaagccc
780

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aaactatggt aaattgcttt acatctctac caggtcacct gatatacagg aaataaaact  
 840  
 caactatctt ccctcttgag gtaagcccaa gccagagcac tgttttagca gagtctaaaa  
 900  
 gaaaaagggtc tcaactgtcg ccagggttta cattcatctt cacaccagga gttacattca  
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 1020  
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 1260  
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 1320  
 ggtcgggtctg gagttgtcga agaattaatt ccagctgatt gactttcccg gtcagtgggtg  
 1380  
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 1440  
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 1500  
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 1560  
 cagcatgggc aggacctgga aggggcccga gagctgccct tatgtgtaga tccaggcagt  
 1620  
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 1740  
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 1836

&lt;210&gt; 3040

&lt;211&gt; 142

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3040

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Leu | Cys | His | Cys | Leu | Asp | Leu | His | Ile | Arg | Ala | Ala | Leu | Met | Pro |
| 1   |     |     | 5   |     |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Leu | Pro | Asp | Thr | Ala | Thr | Gly | Leu | Asp | Trp | Thr | His | Leu | Val | Asp | Ala |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |     |
| Ala | Arg | Ala | Phe | Glu | Asp | Gln | Arg | Val | Ala | Ser | Phe | Cys | Thr | Leu | Thr |
|     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Asp | Met | Gln | His | Gly | Gln | Asp | Leu | Glu | Gly | Ala | Gln | Glu | Leu | Pro | Leu |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Cys | Val | Asp | Pro | Gly | Ser | Gly | Lys | Glu | Phe | Met | Asp | Thr | Thr | Gly | Glu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Arg | Ser | Pro | Ser | Pro | Leu | Thr | Gly | Lys | Val | Asn | Gln | Leu | Glu | Leu | Ile |



|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
|     |     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |  |  |  |  |
| Leu | Arg | Gln | Leu | Gln | Thr | Asp | Leu | Arg | Lys | Glu | Lys | Gln | Asp | Lys | Ala |  |  |  |  |
|     |     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |  |  |  |  |
| Gly | Leu | Gln | Ala | Glu | Val | Gln | His | Leu | Arg | Gln | Asp | Asn | Met | Arg | Leu |  |  |  |  |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |  |  |  |  |
| Gln | Glu | Glu | Ser | Gln | Thr | Ala | Thr | Ala | Gln | Leu | Arg | Lys | Leu |     |     |  |  |  |  |
|     |     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |  |  |  |  |

&lt;210&gt; 3041

&lt;211&gt; 1512

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3041

```

ncacgaggag ccagagtctg tcaggcgggt tggatgaagg cgcggggccc ggcacggcgt
60
tgggagtgcg cggcagggac cggccaggcg ggctgcaggc acctcagagc cggggacacc
120
ccctcaacgt ccgcaggcgc gatgaaggca ctgatcttag tggggggcta tgggacgcgg
180
ctacggccgc tgacgtgag caccccaag ccactggtgg acttctgcaa taagcccatc
240
ttgctgcacc aagtggaggc gctagccgcg gcaggcgtgg accacgtgat cctggccgtg
300
agctacatgt cgcagggtgct ggagaaggaa atgaaggcac aggagcagag gctgggaatc
360
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420
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480
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540
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600
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660
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720
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840
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900
gtgctggtgg acccaagtgc ccgcattcggc cagaactgca gcattggccc caatgtgagc
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1020
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1080
gtgggtcagt gggtagcat ggagaacgtg acagtgtgg gtgaggacgt catagttaat
1140
gatgagctct acctcaacgg agccagcgtg ctgccccaca agtctattgg cgagtcagtg
1200

```

ccagagcctc gtatcatcat gtgaggggat gcagtggggc tggccgagcc ccggttttcc  
 1260  
 catcagcaag gggagtgtg gcctgacaca tcagaagacc ctggacttgt cattatttgt  
 1320  
 ctggggggca ctgggtgaag ctgaagctgt tggacacctg ccttctcatg tggacatcat  
 1380  
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 1440  
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 1500  
 aaaaaaaaaa aa  
 1512

<210> 3042  
 <211> 360  
 <212> PRT  
 <213> Homo sapiens

<400> 3042  
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 1 5 10 15  
 Leu Thr Leu Ser Thr Pro Lys Pro Leu Val Asp Phe Cys Asn Lys Pro  
 20 25 30  
 Ile Leu Leu His Gln Val Glu Ala Leu Ala Ala Ala Gly Val Asp His  
 35 40 45  
 Val Ile Leu Ala Val Ser Tyr Met Ser Gln Val Leu Glu Lys Glu Met  
 50 55 60  
 Lys Ala Gln Glu Gln Arg Leu Gly Ile Arg Ile Ser Met Ser His Glu  
 65 70 75 80  
 Glu Glu Pro Leu Gly Thr Ala Gly Pro Leu Ala Leu Ala Arg Asp Leu  
 85 90 95  
 Leu Ser Glu Thr Ala Asp Pro Phe Phe Val Leu Asn Ser Asp Val Ile  
 100 105 110  
 Cys Asp Phe Pro Phe Gln Ala Met Val Gln Phe His Arg His His Gly  
 115 120 125  
 Gln Glu Gly Ser Ile Leu Val Thr Lys Val Glu Glu Pro Ser Lys Tyr  
 130 135 140  
 Gly Val Val Val Cys Glu Ala Asp Thr Gly Arg Ile His Arg Phe Val  
 145 150 155 160  
 Glu Lys Pro Gln Val Phe Val Ser Asn Lys Ile Asn Ala Gly Met Tyr  
 165 170 175  
 Ile Leu Ser Pro Ala Val Leu Arg Arg Ile Gln Leu Gln Pro Thr Ser  
 180 185 190  
 Ile Glu Lys Glu Val Phe Pro Ile Met Ala Lys Glu Gly Gln Leu Tyr  
 195 200 205  
 Ala Met Glu Leu Gln Gly Phe Trp Met Asp Ile Gly Gln Pro Lys Asp  
 210 215 220  
 Phe Leu Thr Gly Met Cys Leu Phe Leu Gln Ser Leu Arg Gln Lys Gln  
 225 230 235 240  
 Pro Glu Arg Leu Cys Ser Gly Pro Gly Ile Val Gly Asn Val Leu Val  
 245 250 255  
 Asp Pro Ser Ala Arg Ile Gly Gln Asn Cys Ser Ile Gly Pro Asn Val  
 260 265 270  
 Ser Leu Gly Pro Gly Val Val Val Glu Asp Gly Val Cys Ile Arg Arg

|   |     |     |
|---|-----|-----|
| 275   | 280 | 285 |
| Cys Thr Val Leu Arg Asp Ala Arg Ile Arg Ser His Ser Trp Leu Glu |     |     |
| 290   | 295 | 300 |
| Ser Cys Ile Val Gly Trp Arg Cys Arg Val Gly Gln Trp Val Arg Met |     |     |
| 305   | 310 | 315 |
| Glu Asn Val Thr Val Leu Gly Glu Asp Val Ile Val Asn Asp Glu Leu |     |     |
| 325   | 330 | 335 |
| Tyr Leu Asn Gly Ala Ser Val Leu Pro His Lys Ser Ile Gly Glu Ser |     |     |
| 340   | 345 | 350 |
| Val Pro Glu Pro Arg Ile Ile Met                                 |     |     |
| 355   | 360 |     |

&lt;210&gt; 3043

&lt;211&gt; 394

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3043

```

agatctcctt ggatctggag gccctggctt tcagccagag gcagggggag aaagatgatg
60
tctcatgatg ccagcgcttc ctcttcactg gcgtctgacc caggagcagt ccagaatcag
120
cttctctgac ctcaactccaa ctcaactgtc tttgacactt taagggactt cctgttttag
180
ggctctcttg ctgggtgtca ttgaatgggc agtgattctc taactttaga ctgatgttcc
240
ccagcctttg tttggggact cggaggcaga gtagacagtt acccttacct ctgggttggg
300
gagggtcata ttcttggtat cccagaggag tcaacagggg cttcattttt ctgagggact
360
agaggggtctt gtggagctcc tgggacagag atct
394

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&lt;210&gt; 3044

&lt;211&gt; 115

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3044

|   |     |     |
|---|-----|-----|
| Met Lys Pro Leu Leu Thr Ser Trp Gly Tyr Gln Glu Tyr Asp Pro Pro |     |     |
| 1   | 5   | 10  |
| Gln Pro Arg Gly Lys Gly Asn Cys Leu Leu Cys Leu Arg Val Pro Lys |     |     |
| 20  | 25  | 30  |
| Gln Arg Leu Gly Asn Ile Ser Leu Lys Leu Glu Asn His Cys Pro Phe |     |     |
| 35  | 40  | 45  |
| Asn Asp Thr Gln Pro Glu Asp Pro Lys Thr Gly Ser Pro Leu Lys Cys |     |     |
| 50  | 55  | 60  |
| Gln Arg His Val Ser Trp Ser Glu Val Arg Glu Ala Asp Ser Gly Leu |     |     |
| 65  | 70  | 75  |
| Leu Leu Gly Gln Thr Pro Val Lys Arg Lys Arg Trp His His Glu Thr |     |     |
| 85  | 90  | 95  |
| Ser Ser Phe Ser Pro Cys Leu Trp Leu Lys Ala Arg Ala Ser Arg Ser |     |     |
| 100   | 105 | 110 |
| Lys Glu Ile   |     |     |

115

<210> 3045  
 <211> 605  
 <212> DNA  
 <213> Homo sapiens

<400> 3045  
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 60  
 gaagaaattc tttgttacia gctgctatcc atgtccaggg ccaaacaatga atcctattgc  
 120  
 tcttggggagc cgctggccttg cttatgcaga aaacaagttg attcgatgtc atcagtcccg  
 180  
 tgggtggagcc tgtggagaca acattcagtc ttatactgcc acagtcatta gtgctgctaa  
 240  
 aacattgaaa agtggcctga caatggtagg gaaagtgggtg actcagctga caggcacact  
 300  
 gccttcaggt gtgacagaag atgatgttgc catccacagt aattcacggc ggagtccttt  
 360  
 ggtcccaggc atcatcacag ttattgacac cgaaaccgtg gagagggcca ggtgtttgtg  
 420  
 agtgaggatc ttgacagtga tggcattgtg gcccaacttc ctgcccata gaagccagt  
 480  
 tgctgcatgg cttttaatac aagtggaatg cttctagtca caacagacac ccttggccat  
 540  
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 600  
 cgcgt  
 605

<210> 3046  
 <211> 72  
 <212> PRT  
 <213> Homo sapiens

<400> 3046  
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 1 5 10 15  
 Ser Asp Gly Ile Val Ala His Phe Pro Ala His Glu Lys Pro Val Cys  
 20 25 30  
 Cys Met Ala Phe Asn Thr Ser Gly Met Leu Leu Val Thr Thr Asp Thr  
 35 40 45  
 Leu Gly His Asp Phe His Val Phe Gln Ile Leu Thr His Pro Trp Ser  
 50 55 60  
 Ser Ser Thr Glu Arg Arg Gln Arg  
 65 70

<210> 3047  
 <211> 391  
 <212> DNA  
 <213> Homo sapiens

<400> 3047

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 120  
 ttggttgagt caggaattca gtttatggat gagccagaaa tggcagtgtt tctgcagaat  
 180  
 gccaaaaccc tgctaaaaaa aatctcggaa gcatcaaagg catttcagat ggagaaaata  
 240  
 gaacatggct atgagaacat gaaccacttc acagtcaacc tcaatagaga agaaaagata  
 300  
 atacgtgaaa ttgactttta cagagaagat gaagatgaag aagaagaaga aggcggagaa  
 360  
 ggagaaaaag aagagaagga gaagtgggag a  
 391

<210> 3048

<211> 122

<212> PRT

<213> Homo sapiens

<400> 3048

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Thr | Gln | Val | Ile | Thr | Arg | Thr | Gln | Glu | Lys | Leu | Glu | His | Val |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |
| Arg | Ala | Leu | Ile | Lys | Lys | Tyr | Ser | Asp | His | Leu | Glu | Asn | Val | Ser |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Leu | Val | Glu | Ser | Gly | Ile | Gln | Phe | Met | Asp | Glu | Pro | Glu | Met | Ala |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |
| Phe | Leu | Gln | Asn | Ala | Lys | Thr | Leu | Leu | Lys | Lys | Ile | Ser | Glu | Ala |
|     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Lys | Ala | Phe | Gln | Met | Glu | Lys | Ile | Glu | His | Gly | Tyr | Glu | Asn | Met |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| His | Phe | Thr | Val | Asn | Leu | Asn | Arg | Glu | Glu | Lys | Ile | Ile | Arg | Glu |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Asp | Phe | Tyr | Arg | Glu | Asp | Glu | Asp | Glu | Glu | Glu | Glu | Glu | Gly | Glu |
|     |     | 100 |     |     |     | 105 |     |     |     |     |     | 110 |     |     |
| Gly | Glu | Lys | Glu | Glu | Lys | Glu | Lys | Trp | Glu |     |     |     |     |     |
|     |     | 115 |     |     |     | 120 |     |     |     |     |     |     |     |     |

<210> 3049

<211> 599

<212> DNA

<213> Homo sapiens

<400> 3049

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 120  
 tttccttctc tgaacgaaag ctcggccgag gtgctcgaat acaccattaa ggaagaaaag  
 180  
 tcgatattgt acctggaagg ctcggtctct gtgtttgagg acatcttcag attgattgcy  
 240  
 ttctactgtg tcagtagaga cttactgccc ttcacactgc ggctacccca ggccatcctt  
 300

gaggccagca gcttcacgga ccttgagacc atcgccaacc tgggtctggg tttctgggac  
 360  
 tcctcgctga atcctccaca agaaagaggg aagccagcag agccccaag agaccgggccc  
 420  
 cccggattcc ccctagtctc cagcctcagg cccacagccc atgacgcaaa ctgtgcctgt  
 480  
 gaaatcgagc tgctcgtagg aaatgaccgc ctgtggtttg tgaatcctat tttcatcgag  
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 599

<210> 3050  
 <211> 177  
 <212> PRT  
 <213> Homo sapiens

<400> 3050  
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 Thr Ile Lys Glu Glu Lys Ser Ile Leu Tyr Leu Glu Gly Ser Ala Leu  
 35 40 45  
 Val Phe Glu Asp Ile Phe Arg Leu Ile Ala Phe Tyr Cys Val Ser Arg  
 50 55 60  
 Asp Leu Leu Pro Phe Thr Leu Arg Leu Pro Gln Ala Ile Leu Glu Ala  
 65 70 75 80  
 Ser Ser Phe Thr Asp Leu Glu Thr Ile Ala Asn Leu Gly Leu Gly Phe  
 85 90 95  
 Trp Asp Ser Ser Leu Asn Pro Pro Gln Glu Arg Gly Lys Pro Ala Glu  
 100 105 110  
 Pro Pro Arg Asp Arg Ala Pro Gly Phe Pro Leu Val Ser Ser Leu Arg  
 115 120 125  
 Pro Thr Ala His Asp Ala Asn Cys Ala Cys Glu Ile Glu Leu Ser Val  
 130 135 140  
 Gly Asn Asp Arg Leu Trp Phe Val Asn Pro Ile Phe Ile Glu Asp Cys  
 145 150 155 160  
 Ser Ser Ala Leu Pro Thr Asp Gln Pro Pro Leu Gly Asn Cys Pro Ser  
 165 170 175  
 Arg

<210> 3051  
 <211> 820  
 <212> DNA  
 <213> Homo sapiens

<400> 3051  
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 60  
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 120  
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 180

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<210> 3052

<211> 62

<212> PRT

<213> Homo sapiens

<400> 3052

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Leu | Ser | Gly | Tyr | Gln | His | Asn | Ile | Pro | Pro | Thr | Phe | Ser | Ser | Gln |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Gly | Thr | Pro | Ser | Ser | Ala | Thr | Val | Ala | Gln | Gln | Ala | Ser | Ser | Ser | Pro |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Val | Pro | Gly | Gly | Thr | Pro | Thr | Asp | Ala | Leu | Ser | Pro | Xaa | Thr | Thr | Met |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Thr | Ser | His | Pro | Ser | Ser | Pro | Lys | Cys | Gly | Val | Ser | Pro | Leu |     |     |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |

<210> 3053

<211> 2625

<212> DNA

<213> Homo sapiens

<400> 3053

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1920



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 2625

&lt;210&gt; 3054

&lt;211&gt; 417

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3054

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Gly | Xaa | Ser | Glu | His | Thr | Ser | Xaa | Met | Leu | Ser | Leu | Ser | His | Gln |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Glu | Lys | Pro | Glu | Glu | Pro | Pro | Thr | Ser | Asn | Glu | Cys | Leu | Glu | Asp | Ile |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Thr | Val | Lys | Asp | Gly | Leu | Ser | Leu | Gln | Phe | Lys | Arg | Phe | Arg | Glu | Thr |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Val | Pro | Thr | Trp | Asp | Thr | Ile | Arg | Asp | Glu | Glu | Asp | Val | Leu | Asp | Glu |
|     | 50  |     |     |     | 55  |     |     |     |     |     | 60  |     |     |     |     |
| Leu | Leu | Gln | Tyr | Leu | Gly | Val | Thr | Ser | Pro | Glu | Cys | Leu | Gln | Arg | Thr |
| 65  |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     | 80  |     |
| Gly | Ile | Ser | Leu | Asn | Ile | Pro | Ala | Pro | Gln | Pro | Val | Cys | Ile | Ser | Glu |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Lys | Gln | Glu | Asn | Asp | Val | Ile | Asn | Ala | Ile | Leu | Lys | Gln | His | Thr | Glu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Glu | Lys | Glu | Phe | Val | Glu | Lys | His | Phe | Asn | Asp | Leu | Asn | Met | Lys | Ala |
|     | 115 |     |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Val | Glu | Gln | Asp | Glu | Pro | Ile | Pro | Gln | Lys | Pro | Gln | Ser | Ala | Phe | Tyr |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Tyr | Cys | Arg | Leu | Leu | Leu | Ser | Ile | Leu | Gly | Met | Asn | Ser | Trp | Asp | Lys |
| 145 |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     | 160 |     |
| Arg | Arg | Ser | Phe | His | Leu | Leu | Lys | Lys | Asn | Glu | Lys | Leu | Leu | Arg | Glu |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Leu | Arg | Asn | Leu | Asp | Ser | Arg | Gln | Cys | Arg | Glu | Thr | His | Lys | Ile | Ala |

|     |   |     |     |     |     |
|-----|---|-----|-----|-----|-----|
|     | 180   |     | 185 |     | 190 |
| Val | Phe Tyr Val Ala Glu Gly Gln Glu Asp Lys His Ser Ile Leu Thr |     |     |     |     |
|     | 195   |     | 200 |     | 205 |
| Asn | Thr Gly Gly Ser Gln Ala Tyr Glu Asp Phe Val Ala Gly Leu Gly |     |     |     |     |
|     | 210   |     | 215 |     | 220 |
| Trp | Glu Val Asn Leu Thr Asn His Cys Gly Phe Met Gly Gly Leu Gln |     |     |     |     |
|     | 225   |     | 230 |     | 235 |
| Lys | Asn Lys Ser Thr Gly Leu Thr Thr Pro Tyr Phe Ala Thr Ser Thr |     |     |     |     |
|     |   | 245 |     | 250 | 255 |
| Val | Glu Val Ile Phe His Val Ser Thr Arg Met Pro Ser Asp Ser Asp |     |     |     |     |
|     |   | 260 |     | 265 | 270 |
| Asp | Ser Leu Thr Lys Lys Leu Arg His Leu Gly Asn Asp Glu Val His |     |     |     |     |
|     |   | 275 |     | 280 | 285 |
| Ile | Val Trp Ser Glu His Thr Arg Asp Tyr Arg Arg Gly Ile Ile Pro |     |     |     |     |
|     |   | 290 |     | 295 | 300 |
| Thr | Glu Phe Gly Asp Val Leu Ile Val Ile Tyr Pro Met Lys Asn His |     |     |     |     |
|     |   | 305 |     | 310 | 315 |
| Met | Phe Ser Ile Gln Ile Met Lys Lys Pro Glu Val Pro Phe Phe Gly |     |     |     |     |
|     |   | 325 |     | 330 | 335 |
| Pro | Leu Phe Asp Gly Ala Ile Val Asn Gly Lys Val Leu Pro Ile Met |     |     |     |     |
|     |   | 340 |     | 345 | 350 |
| Val | Arg Ala Thr Ala Ile Asn Ala Ser Arg Ala Leu Lys Ser Leu Ile |     |     |     |     |
|     |   | 355 |     | 360 | 365 |
| Pro | Leu Tyr Gln Asn Phe Tyr Glu Glu Arg Ala Arg Tyr Leu Gln Thr |     |     |     |     |
|     |   | 370 |     | 375 | 380 |
| Ile | Val Gln His His Leu Glu Pro Thr Thr Phe Glu Asp Phe Ala Ala |     |     |     |     |
|     |   | 385 |     | 390 | 395 |
| Gln | Val Phe Ser Pro Ala Pro Tyr His His Leu Pro Ser Asp Ala Asp |     |     |     |     |
|     |   | 405 |     | 410 | 415 |
| His |   |     |     |     |     |

&lt;210&gt; 3055

&lt;211&gt; 905

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3055

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<210> 3056  
 <211> 195  
 <212> PRT  
 <213> Homo sapiens

<400> 3056  
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 35 40 45  
 Ser Glu His Gly Thr Thr Val Asp Asn Val Leu Tyr Ser Cys Asp Phe  
 50 55 60  
 Ser Glu Lys Thr Pro Pro Thr Pro Pro Ser Ser Ile Val Ala Lys Val  
 65 70 75 80  
 Gln Ser Val Ile Arg Arg Arg Arg His Gln Lys Gln Asp Glu Glu Pro  
 85 90 95  
 Ser Glu Glu Ala Ala Met Met Ser Ser Gln Ala Gln Gly Pro Gln Arg  
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 Arg Pro Cys Asn Cys Lys Ala Ser Ser Ser Ser Leu Ile Gly Gly Ser  
 115 120 125  
 Gly Ala Gly Trp Glu Gly Thr Ala Leu Leu His His Gly Ser Tyr Ile  
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 Lys Leu Gly Cys Leu Gln Phe Val Phe Ser Ile Thr Glu Phe Ala Thr  
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<210> 3057  
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 <212> DNA  
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&lt;400&gt; 3057

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&lt;210&gt; 3058

&lt;211&gt; 298

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3058

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Gln | Leu | Pro | Pro | Thr | Leu | Val | Thr | Ser | Phe | Glu | Gly | Lys | His | Gly |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Ser | Val | Arg | Tyr | Cys | Ile | Lys | Ala | Thr | Leu | His | Arg | Pro | Trp | Val | Pro |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ala | Arg | Arg | Ala | Arg | Lys | Val | Phe | Thr | Val | Ile | Glu | Pro | Val | Asp | Ile |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Asn | Thr | Pro | Ala | Leu | Leu | Ala | Pro | Gln | Ala | Gly | Ala | Arg | Glu | Lys | Val |
|     |     | 50  |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Ala | Arg | Ser | Trp | Tyr | Cys | Asn | Arg | Gly | Leu | Val | Ser | Leu | Ser | Ala | Lys |
| 65  |     |     |     | 70  |     |     |     | 75  |     |     |     |     |     | 80  |     |
| Ile | Asp | Arg | Lys | Gly | Tyr | Thr | Pro | Gly | Glu | Val | Ile | Pro | Val | Phe | Ala |
|     |     | 85  |     |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Glu | Ile | Asp | Asn | Gly | Ser | Thr | Arg | Pro | Val | Leu | Pro | Arg | Ala | Ala | Val |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Val | Gln | Thr | Gln | Thr | Phe | Met | Ala | Arg | Gly | Ala | Arg | Lys | Gln | Lys | Arg |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Ala | Val | Val | Ala | Ser | Leu | Ala | Gly | Glu | Pro | Val | Gly | Pro | Gly | Gln | Arg |
|     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Ala | Leu | Trp | Gln | Gly | Arg | Ala | Leu | Arg | Ile | Pro | Pro | Val | Gly | Pro | Ser |
| 145 |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     | 160 |     |
| Ile | Leu | His | Cys | Arg | Val | Leu | His | Val | Asp | Tyr | Ala | Leu | Lys | Val | Cys |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Val | Asp | Ile | Pro | Gly | Thr | Ser | Lys | Leu | Leu | Leu | Glu | Leu | Pro | Leu | Val |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Ile | Gly | Thr | Ile | Pro | Leu | His | Pro | Phe | Gly | Ser | Arg | Ser | Ser | Ser | Val |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     | 195 |     | 200 |     | 205 |     |     |     |     |     |     |     |     |     |     |
| Gly | Ser | His | Ala | Ser | Phe | Leu | Leu | Asp | Trp | Arg | Leu | Gly | Ala | Leu | Pro |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Glu | Arg | Pro | Glu | Ala | Pro | Pro | Glu | Tyr | Ser | Glu | Val | Val | Ala | Asp | Thr |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     | 240 |     |
| Glu | Glu | Ala | Ala | Leu | Gly | Gln | Ser | Pro | Phe | Pro | Leu | Pro | Gln | Asp | Pro |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     | 255 |     |     |
| Asp | Met | Ser | Leu | Glu | Gly | Pro | Phe | Phe | Ala | Tyr | Ile | Gln | Glu | Phe | Arg |
|     |     |     | 260 |     |     |     |     | 265 |     |     |     | 270 |     |     |     |
| Tyr | Arg | Pro | Pro | Pro | Leu | Tyr | Ser | Glu | Glu | Asp | Pro | Asn | Pro | Leu | Leu |
|     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |     |
| Gly | Asp | Met | Arg | Pro | Arg | Cys | Met | Thr | Cys |     |     |     |     |     |     |
|     | 290 |     |     |     | 295 |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 3059

&lt;211&gt; 1411

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3059

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1020

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<210> 3060

<211> 334

<212> PRT

<213> Homo sapiens

<400> 3060

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| Met | Gly | Arg | Arg | Ser | Ser | Asp | Thr | Glu | Glu | Glu | Ser | Arg | Ser | Lys | Arg |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Lys | Lys | Lys | His | Arg | Arg | Arg | Ser | Ser | Ser | Ser | Ser | Ser | Ser | Asp | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     |     | 30  |     |
| Arg | Thr | Tyr | Ser | Arg | Lys | Lys | Gly | Gly | Arg | Lys | Ser | Arg | Ser | Lys | Ser |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Arg | Ser | Trp | Ser | Arg | Asp | Leu | Gln | Pro | Arg | Ser | His | Ser | Tyr | Asp | Arg |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Arg | Arg | Arg | His | Arg | Ser | Ser | Ser | Ser | Ser | Ser | Tyr | Gly | Ser | Arg | Arg |
| 65  |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     | 80  |     |
| Lys | Arg | Ser | Arg | Ser | Arg | Ser | Arg | Gly | Arg | Gly | Lys | Ser | Tyr | Arg | Val |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |     |
| Gln | Arg | Ser | Arg | Ser | Lys | Ser | Arg | Thr | Arg | Arg | Ser | Arg | Ser | Arg | Pro |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     |     | 110 |     |
| Arg | Leu | Arg | Ser | His | Ser | Arg | Ser | Ser | Glu | Arg | Ser | Ser | His | Arg | Arg |
|     | 115 |     |     |     |     | 120 |     |     |     |     |     | 125 |     |     |     |
| Thr | Arg | Ser | Arg | Ser | Arg | Asp | Arg | Glu | Arg | Arg | Lys | Gly | Arg | Asp | Lys |
|     | 130 |     |     |     |     | 135 |     |     |     |     |     | 140 |     |     |     |
| Glu | Lys | Arg | Glu | Lys | Glu | Lys | Asp | Lys | Gly | Lys | Asp | Lys | Glu | Leu | His |
| 145 |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     | 160 |     |
| Asn | Ile | Lys | Arg | Gly | Glu | Ser | Gly | Asn | Ile | Lys | Ala | Gly | Leu | Glu | His |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     |     | 175 |     |
| Leu | Pro | Pro | Ala | Glu | Gln | Ala | Lys | Ala | Arg | Leu | Gln | Leu | Val | Leu | Glu |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Ala | Ala | Ala | Lys | Ala | Asp | Glu | Ala | Leu | Lys | Ala | Lys | Glu | Arg | Asn | Glu |
|     | 195 |     |     |     |     | 200 |     |     |     |     |     | 205 |     |     |     |
| Glu | Glu | Ala | Lys | Arg | Arg | Lys | Glu | Glu | Asp | Gln | Ala | Thr | Leu | Val | Glu |
|     | 210 |     |     |     |     | 215 |     |     |     |     |     | 220 |     |     |     |
| Gln | Val | Lys | Arg | Val | Lys | Glu | Ile | Glu | Ala | Ile | Glu | Ser | Asp | Ser | Phe |
| 225 |     |     |     | 230 |     |     |     |     |     | 235 |     |     |     | 240 |     |
| Val | Gln | Gln | Thr | Phe | Arg | Ser | Ser | Lys | Glu | Val | Lys | Lys | Ser | Val | Glu |
|     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |     |
| Pro | Ser | Glu | Val | Lys | Gln | Ala | Thr | Ser | Thr | Ser | Gly | Pro | Ala | Ser | Ala |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     | 260 |     | 265 |     | 270 |     |     |     |     |     |     |     |     |     |     |
| Val | Ala | Asp | Pro | Pro | Ser | Thr | Glu | Lys | Glu | Ile | Asp | Pro | Thr | Ser | Ile |
|     | 275 |     |     |     |     |     | 280 |     |     |     | 285 |     |     |     |     |
| Pro | Thr | Ala | Ile | Lys | Tyr | Gln | Asp | Asp | Asn | Ser | Leu | Ala | His | Pro | Asn |
|     | 290 |     |     |     |     | 295 |     |     |     |     | 300 |     |     |     |     |
| Leu | Phe | Ile | Glu | Lys | Ala | Asp | Ala | Glu | Glu | Lys | Trp | Phe | Lys | Arg | Leu |
| 305 |     |     |     |     | 310 |     |     |     |     | 315 |     |     |     |     | 320 |
| Ile | Ala | Leu | Arg | Gln | Glu | Arg | Leu | Met | Gly | Ser | Pro | Val | Ala |     |     |
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&lt;210&gt; 3061

&lt;211&gt; 1554

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3061

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 50 55 60  
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 65 70 75 80  
 Glu Lys Cys Ser Thr Ser Ile Ala Asn Gln Ala Val Arg Ile Gln Glu  
 85 90 95  
 Gly Arg Tyr Arg His Pro Gly Cys Tyr Thr Cys Ala Asp Cys Gly Leu  
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 Asn Leu Lys Met Arg Gly His Phe Trp Val Gly Asp Glu Leu Tyr Cys  
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<210> 3064  
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 <212> PRT  
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<212> PRT  
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Ser Gln Gly Pro Xaa Thr Ala Pro Gly Ser Pro Cys Arg Ser Cys Gly  
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Gln Glu Glu Leu Ala Tyr Tyr Lys Ser Glu Glu Met Glu Glu Glu Asn  
100 105 110  
Arg Ile Pro Gln Pro Pro Pro Ile Ala His Pro Arg Thr Ser Pro Gln  
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Pro Glu Ser Gly Ile Lys Arg Leu Phe Ser Phe Phe Ser Arg Asp Lys  
130 135 140  
Lys Arg Leu Ala Asn Thr Gln Arg Asn Val His Ile Gln Glu Ser Phe  
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 <212> PRT  
 <213> Homo sapiens

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 50 55 60  
 Leu Gln Pro Pro Ser Thr Pro Pro Pro Pro Val His Lys Glu Gln Lys  
 65 70 75 80  
 Lys Ser Asp Pro Pro Pro Pro Pro Gly Lys Phe Lys Ser Phe Leu  
 85 90 95  
 Pro Pro Arg Ser Pro Gly Asn Ser Ala Leu Gly Pro Arg Arg Gly Trp  
 100 105 110  
 Gly Trp Ile Ala Ala Gly Gly Ala Pro Ala Met Pro Arg Pro Pro Ser  
 115 120 125  
 Gly Ala Gly Asp Arg Glu Ile Pro Arg Asp Leu Ala Cys Ala Pro Tyr  
 130 135 140  
 Pro Pro Pro Gly Ala Gly Arg Gly Ser Glu His Arg Ser Ala Pro Gly  
 145 150 155 160  
 Arg Arg Cys Gly Ser Lys Glu Pro Glu Ala Ala Ser Arg Pro Pro  
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 Pro Ser Pro Ala Pro Pro Pro Arg Gly Glu Trp Gly  
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<210> 3069  
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 <212> DNA  
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 180

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&lt;210&gt; 3070

&lt;211&gt; 153

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3070

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Met His Leu Lys Asp Leu Gly Leu Asn Phe His Val Ser Val Leu Gly
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      20           25           30
Leu Gly Ser Ser Val Leu His Trp Gly Tyr Leu Pro Ser Lys Asp Asp
      35           40           45
Tyr Phe Gln Val Leu Cys Val Ala Asp Val Val Ile Ser Thr Ala Lys
      50           55           60
His Glu Phe Phe Gly Val Ala Met Leu Glu Ala Val Tyr Cys Gly Cys
      65           70           75           80
Tyr Pro Leu Cys Pro Lys Asp Leu Val Tyr Pro Glu Ile Phe Pro Ala
      85           90           95
Glu Tyr Leu Tyr Ser Thr Pro Glu Gln Leu Ser Lys Arg Leu Gln Asn
      100          105          110
Phe Cys Lys Arg Pro Asp Ile Ile Arg Lys His Leu Tyr Lys Gly Glu
      115          120          125
Ile Ala Pro Phe Ser Trp Ala Ala Leu His Gly Lys Phe Arg Ser Leu
      130          135          140
Leu Thr Thr Glu Pro Arg Glu Asp Leu
      145          150

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&lt;210&gt; 3071

&lt;211&gt; 3343

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3071

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